CONSTRUCTION NEWS

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RAILWAYS.

(Denotes that this work is advertised in Engineering News.)*

CANADA NORTHERN.—Interests identified with this road are going to take over and build the Alberta & Great Waterways Ry. This is the report as a result of the statement that several parties of surveyors are being sent into the North country by Mackenzie & Mann. Settlers say there is little reason to doubt that they will build the line for the Provincial Government and in all probability either buy it outright from the Government or operate it on a long term lease.

CHICAGO, MEMPHIS & GULF R. R.—W. L. MOZLEY, of Memphis, Tenn., and C. T. BONDURANT, of Hickman, Ky., have secured the contract, according to press reports, to grade the right-of-way of the Chicago, Memphis & Gulf R. R. from a point ten miles out of Hickman into that city. S. G. Latta, Dyersburg, Tenn., is Pres.

CHICAGO, MILWAUKEE & PUGET SOUND RY.—Contracts have been let to H. C. HENRY, White Bldg., Seattle, Wash., to build the Idaho & Western, from Dishman, Wash., east by the way of Liberty Lake Junction and Post Falls to Coeur d'Alene. There will be a steel bridge over the Spokane River, and docks at Coeur d'Alene. The distance is about 35 miles. E. J. Pearson, Seattle, Wash., is Ch. Engr. in charge of this work.

ERIE R. R.—Press advices are to the effect that the Erie R. R. and the city authorities of Paterson, N. J., are seeking to find a way to eliminate several grade crossings in that city. F. L. Staurt, 50 Church St., New York, is Ch. Engr.

GULF LINE RY.—Preliminary surveys are being made for an extension to St. Andrews, Fla., by the way of Donalsonville, Ga. W. T. Hargrett, Sylvester, Ga., is Gen. Supt.

LOUISIANA.—The Oberlin, Hampton & Eastern Ry. Co. is building a 9¼-mile line, according to official advices, from Oberlin to Hampton, La. The work is light, the country being level. The construction work is being done by a company controlled by the people owning the road. W. B. Williams, Oberlin, La., is Pres. and O. L. Reeszner, Lecompte, La., is Ch. Engr.

NEW MEXICO.—The contract has been let by the Texico, Farwell & Southern R. R., according to press reports, to the CALBACK CONSTRUCTION CO., of Portland, Ore. This is for the construction of 100 miles of railroad from Texico and Farwell south.

NORFOLK & WESTERN RY.—It is stated that the question of constructing a tunnel between Maybeury and Barlow's Hollow near Coopers, W. Va. The proposed tunnel will be about 2½ miles long and will do away with the stiffest grade on the Pocahontas division, which leads to the Coaldale tunnel. On the west side of the tunnel there is a stiff grade leading up to Coaldale which is 2,257 ft. above sea level. C. S. Churchill, Norfolk, Va., is Ch. Engr.

NORTH WESTERN PACIFIC R. R. CO.—The contract was recently awarded for the construction of 31 miles between Willetts and Shively, Cal., to the UTAH CONSTRUCTION CO. The contract includes the construction of a 4,000-ft. tunnel, known as Copper Mine, to be bored through Island mountain. The completion of the contract will bring the road to Fort Seward, on the north, and two miles north of Covelo Bend on the south. W. C. Edes, San Francisco, Cal., is Ch. Engr.

PHILADELPHIA & READING RY.—The itemized bids received for grade crossing elimination work in Philadelphia will be found under "Contract Prices."

TEXAS.—Articles of amendment to the charter of the Chicago, Weatherford and Brazos Valley R. R. have been approved by the attorney general's department. The amendment provides for the extension of the road from Bridgeport, Wise County, in a northeasterly direction, to Gainesville, Cooke County, a distance of about 60 miles, through the counties of Wise, Denton, Montague and Cooke. The main line of the road will now extend from Weatherford to Gainesville.

TEXAS.—A charter has been granted to the Texas, Oklahoma & Eastern R. R. Co. The company has projected a road into the timber belt of McCurtay County from Valliant, through Bismark to Mountain Fork River. The incorporators are: Hans Driets, Harry L. Driets, A. E. Hart and J. S. Kirkpatrick, of Kansas City; S. B. McCartney, of Bismark, and C. E. Baxter and J. H. Cook, of Idabel.

VANDALIA R. R. CO.—Plans are being prepared, according to press reports, to reduce the curvature and eliminate the grades on the main line between Terre Haute, Ind., and St. Louis, Mo., a stretch of about 25 miles will be double tracked. E. T. Hatch, St. Louis, Mo., is Ch. Engr.

VIRGINIA RY.—The contract for the construction of the 18-mile line from Harper to Cirtsville, W. Va., has been let, according to press advices, to CARPENTER & BOXLEY. The work is heavy. H. Fernstrom, Norfolk, Va., is Ch. Engr.

ELECTRICAL RAILWAYS.

NEW HAVEN, CONN.—The Shore Line Electric Ry. has filed plans for extending its line from Guilford and North Branford through the Totoket and Foxen regions, crossing the Quinnipiac River and tapping the line of the Connecticut Co. at State and Ferry Sts., in New Haven. Secy., A. Wm. Sperry.

WATERBURY, CONN.—A complete survey has been made and practically all necessary right-of-way have been secured for the construction of a line from Waterbury and Milldale, a distance of 10 miles. Chas. H. Preston, Jr., 136 Grand St., Waterbury, is Engr.

NEW YORK, N. Y.—The Bronx Traction Co. has made application to the Board of Estimate and Apportionment, New York, for a franchise to construct and maintain a street railway as an extension of the existing system upon White Plains Rd., from Morris Park Ave. to Gun Hill Rd. Nelson P. Lewis is Chief Engr.

NEW YORK N. Y.—The detailed bids for the construction of the Tri-Borough Subway will be found under Contract Prices.

UTICA, N. Y.—The Utica & Mohawk Valley Ry. Co. has made application to the Common Council for a franchise for operating its cars from the end of its tracks in Genesee St. to its North Genesee St. line, including the right to cross the new Genesee St. overcrossing. C. Loomis Allen is Gen. Mgr.

FAR ROCKAWAY, N. Y.—The New York Central R. R and the American Express Co. are considering plans for constructing a electric railway to connect Jamaica, Lynbrook, East Rockaway, Hewlett, Woodmere, Cedarhurst and Rockaway Beach and across Jamaica Bay.

HORNELL, N. Y.—The Hornell Traction Co., D. J. Haren, Engr., states that within the next few weeks it will rebuild its tracks on certain streets.

MANCHESTER, N. Y.—Plans for building an electric railway are under consideration by the Manchester Improvement Co., to connect Manchester, Geneva, Clifton Springs, Port Gibson, Palmyra. This line would connect with the Rochester & Eastern Ry. at Palmyra.

BALDWINSVILLE, N. Y.—A franchise has been granted the Syracuse, Lake Shore & Northern R. R., Syracuse, by the Village Board to double-track its line through Syracuse St.

LEWISBURG, PA.—The construction of an electric trolley service will soon commence, to connect Lewisburg, Mifflinburg and Montandon. F. Whittaker is interested.

BALTIMORE, MD.—A franchise has been granted by the City Council to the United Ry. & Electric Co. to extend its tracks in Baltimore. Secy., Wm. Early.

SALISBURY, MD.—Work will soon be started by the Wicomico Electric & Power Co. on its proposed railway to connect Salisbury, Quantico, Wetepquine, Tyaskin, Bivalvas and Nanticope. The distance is 25 miles. The Industrial Engineering Co., Drexel Bldg., Philadelphia, has charge of the engineering work.

GRAHAM, W. VA.—See item under Light and Power Plants.

MARTINSBURG, W. VA.—The citizens of this city and vicinity have raised $1,200 to be used in making the preliminary survey for an electric railway in Berkley County to connect Martinsburg, Hedgesville and Tomahawk.

CHARLOTTE, N. C.—The Board of Aldermen will be applied to by Paul Chatham for a franchise to build a railway over and along Fourth St.

STATESVILLE, N. C.—The Statesville Air Line Railroad Co. will construct a new line from Statesville to Yadkinville, a distance of 25 miles.

ALBANY, GA.—The City Council has been asked by C. W. Rawson and associates for the right to build an electric railway on certain streets in Albany.

SHREVEPORT, LA.—The Shreveport Traction Co., Engr. Geo. Voight, will, it is stated, apply to the City Council for a franchise to build an extension of its Southern-Fairfield Ave. line in Shreveport.

COLUMBUS, OHIO.—The Hocking-Sunday Creek Traction Co. has made arrangements to float $200,000 bonds, from the proceeds of which sale a line will be built from Nelsonville to Athens. Right of way is now being taken up by agents of the company.

CINCINNATI, OHIO.—The Buckhannon & Tygarts River R. R. Co., Buckhannon, is planning to construct a railroad from Parsons to Huttonsville. Capital, 25,000. The incorporators are U. G. Young, Henry Spies, J. W. F. Stone, G. M. Fleming, C. E. Hiner, all of Buckhannon.

CANTON, OHIO.—See item under Streets and Roads.

DELAVAN, WIS.—A franchise has been granted by the Board of Supervisors to Hamilton Brown, Delavan, to construct an electric railway.

COUNCIL BLUFFS, IA.—The City Council has been applied to by the Omaha & Council Bluffs St. Ry. for a franchise to extend its lines. Secy., Chas. T. Stewart.

OSKALOOSA, IOWA.—The construction of an interurban line between Oskaloosa and Yama is contemplated by the Iowa Traction Co. The distance is 65 miles.

PIERRE, S. D.—The construction of a railway from Omaha by way of Council Bluffs to Sioux City is contemplated by the Omaha & Western Iowa Traction Co. The distance is ninety miles. The estimated cost is $20,000. James S. Sebree, Pierre, is interested.

KANSAS CITY, MO.—Permits have been granted by the Board of Public Works to the Metropolitan St. Ry., Engr. E. Botts, to double-track its line from Broadway to Wyandotte St.

HOT SPRINGS, ARK.—The Hot Springs St. Ry. Co. states that it will soon build a mile extension to its South Hot Springs line.

PORT ARTHUR, TEX.—The promoter of the proposed Beaumont-Port Arthur Interurban Electric Ry. made application for a franchise for the construction of several lines in the city. Col. I. D. Polk is interested.

SAN ANTONIO, TEX.—The Terrell Hot Wells Co. is negotiating with the International & Great Northern R. R. Co. with the view of equipping the tract of the latter road with electric transit between San Antonio and San Jose for the operation of suburban electric cars over it.

NOWATA, OKLA.—The Coffeyville-Nowata Ry. & Power Co. is stated to have awarded the contract for the construction of its proposed 23-mile railway connecting Coffeyville, Kan. and Nowata, Okla. W. V. Thraves, Nowata, Okla., is Gen. Mgr.

SALEM, ORE.—A franchise has been granted to the Oregon Electric Ry., Portland, by the City Council to build its tracks on certain streets.

LODI, CAL.—A franchise has been granted by the Council to the Central California Traction Co. to build its tracks on certain streets.

SAN RAFAEL, CAL.—Application has been made by U. L. Courtright to the Board of Trustees for a franchise for a single track street railway with all necessary appliances on various streets of the city. Bids for the franchise will be received until 8 p. m., Nov. 21, at the City Hall.

OAKLAND, CAL.—The Oakland & Antioch Ry. has resumed the work of grading its line between Bay Point and Lafayette, the contract for which has been awarded to the BAY POINT CONSTRUCTION CO.

PORTERVILLE, CAL.—The Porterville Northeastern Ry. has completed surveys and secured the necessary capital for the construction of its 18-mile electric railway along the north bank of the Yale River.

SOUTH PASADENA, CAL.—A 37-year franchise has been granted to the Pacific Electric Ry., Ch. Engr. Geo. E. Pillsbury, Los Angeles, to double-track some of its lines in South Pasadena.

OTTAWA, ONT.—The OTTAWA ELECTRIC RY. CO. has been awarded the contract for constructing 18 "pay-as-you-enter" cars for the Ottawa Car Co.

WESTMINSTER, B. C.—The Board of Trade is considering plans for building an electric railway to connect Westminster and Ladner.

LIGHT AND POWER PLANTS.

(Denotes that this work is advertised in Engineering News.)*

LEOMINSTER, MASS.—The Leominster Electric Light & Power Co. will erect a large addition to its plant. The new building will be equipped with two 300-HP. Manning boilers, to replace some of the boilers now in use, and a 750-HP. turbine.

PROVIDENCE, R. I.—Plans for doubling the capacity of the Manchester St. powerhouse are being considered by the Rhode Island Co. Contracts for machinery and piping will be awarded in about 30 days. Estimated cost, about $300,000. A. E. Potter is Gen. Mgr.

NEW HAVEN, CONN.—We are officially advised that the Board of Education has awarded contract to C. S. MERICK & CO., New Haven, for installing lamps for the New Haven High School. G. S. Hewlett is Secy.

OAKVILLE, CONN.—The citizens voted to form a fire district for lighting purposes. A committee was chosen to take charge of the matter, of which B. F. Ball is chairman.

NEW YORK, N. Y.—Bids are asked by William H. Edwards, Comr. of St. Cleaning, until noon, Nov. 9, for furnishing all the labor and materials required for the construction and installation of a complete electric lighting system in the new Eastern portion of stable "A" of the Department of Street Cleaning, 17th St. and Avenue C, Boro. Manhattan.

NEW YORK, N. Y.—Bids will be received by the Department of Public Charities until 2.30 p. m., Nov. 11, for furnishing all the labor and materials necessary for steam heating for two cottages, New York City Farm Colony, Boro. of Richmond, City of New York.

NEW YORK, N. Y.—Bids will be received by C. B. J. Snyder, Supt. School Bldgs., Dept. of Education, until 3 p. m., Nov. 14, for installing heating and ventilating apparatus, and installing temperature regulation in addition to and alterations in Girls' High School, on Easterly side of Nostrand Ave., between Halsey and Macon Sts., Boro. Brooklyn, and for tank and tower at Public School 120, Barren Island, Boro. Brooklyn.

Bids were received as follows on Oct. 25 by the Department of Public Charities for all labor and materials for steam heating for three cottages, New York City Farm Colony, Boro. Richmond: Blake & Williams, 24 Barrow St., $7,540; William J. Olvaney, $8,240; Reiss & O'Donovan, $9,480; R. J. McKinnon, $8,124.

NEW YORK, N. Y.—We are officially advised that bids were received on Oct. 31 by C. B. J. Snyder, Supt, of School Buildings, for installing heating and ventilating apparatus in addition to alterations in Erasmus Hall High School, on the easterly side of Flatbush Ave., about 205 ft. north of Grant St., Boro. Brooklyn; and for the installation of electric equipment in addition to and alterations to present equipment in Girl's High School, on the easterly side of Nostrand Ave., between Halsey and Macon Sts., Boro. Brooklyn. Contract has been awarded to BLAKE & WILLIAMS, 24 Barrow St., New York, at $40,689.

***ROME, N. Y.**—Bids for alterations in steam system at the Rome State Custodial Asylum, Rome, will be received by Hon. R. C. Briggs, Pres. Bd. of Managers, Rome, until noon, Nov. 15.

TROY, N. Y.—We are officially advised that bids will be received in about two weeks for the power plant on Burden Pond for the Geer Hydroelectric Co. The plant will be operated by water power. Contracts for all concrete work have been let. Estimated cost, $20,000. Runyan & Carey, Newark, N. J., are Engrs. William C. Geer is owner. Noted on Oct. 27.

WILLIAMSVILLE, N. Y.—We are officially advised that George E. DeGolio, 984 Ellicott Sq., Buffalo, N. Y., recently granted a franchise by the Williamsville Board of Trustees for electric lighting and furnishing electric current for power, will contract for current with one of the Niagara Falls power companies. The lighting plant will be constructed as soon as necessary material and supplies can be secured at private bids.

LYONS, N. Y.—The Safferson & Weisberg Co., which is erecting a new factory on Geneva St. has decided to install a power plant to light and operate its works.

BUFFALO, N. Y.—Bids will be received by the Department of Public Works until Nov. 4 for three steam turbine electric generators for the pumping station, foot of Porter Ave. Plans and specifications can be seen and forms of proposals obtained on application at the Bureau of Water. Francis G. Ward is Comr.

PERRYSBURG, N. Y.—Plans have been prepared for a power plant at the J. N. Adam Tuberculosis Hospital for the city of Buffalo at Perrysburg. The equipment will consist of three 80-HP. water tube boilers, feed pump, compression tank pump, vacuum pump, one 50-KW. generator and one 20-KW. generator, two 5-HP. motors and three 1-HP. motors. John H. Coxhead, 938 Ellicott Sq., Buffalo, is Arch. Noted on Oct. 6.

PALATINE, N. Y.—The Montgomery County Board of Supervisors, Canajoharie, N. Y., has authorized the County Superintendent of the Poor to install a lighting plant, either gas or electricity, at the county buildings here.

BALTIMORE, MD.—The Consolidated Gas, Electric Light & Power Co., will construct a new gas substation, two stories, of brick. A. S. Loizeaux is Ch. Engr.

Contract for the electric wire of the new Emerson Tower building has been awarded to the LORD ELECTRIC CO., 234 Courtland St., Baltimore.

NATIONAL SOLDIERS' HOME, VA.—Bids will be received by John T. Hume, Treas., Southern Branch National Home for Disabled Volunteer Soldiers, until Nov. 15, for furnishing and installing an electric elevator in the quartermaster's storehouse.

GRAHAM, W. VA.—The Town Council has granted to the Graham Light & Power Co. a franchise for the erection of a light and water plant in this city to furnish commercial current and water to the municipality. The franchise also carries the privilege of constructing a street car line.

PARKERSBURG, W. VA.—Bids will be received by the Council, until Nov. 9 for lighting the city with electricity from Jan. 1, 1911, for a 1, 5 or 10-year contract, each bid to be on a basis of at least 250 arc lights of nominal 2,000 c.p. and not less than 50 alley lights. Frank Good is City Audr.

ASHEVILLE, N. C.—See item under Manufacturing Plants.

DALTON, GA.—We are officially advised that bids will be asked the latter part of December or the first of January for improvements to the municipal electric light plant here. Noted on Oct. 27. H. S. Jaudon is Engr., P. O. Box 582, Savannah, Ga.

FRANKLIN, GA.—The North Georgia Electric Co., Atlanta, Ga., is making surveys of the Chattanooga River just north of here. The company is contemplating the construction of a dam and power plant near here.

FORT MEADE, FLA.—S. T. Rivers, Fort Meade, will construct an electric light plant here. Estimated cost, $4,000. Bids for construction will be received about Nov. 1. Noted on Oct. 27.

PENSACOLA, FLA.—The Board of County Commissioners has awarded the contract for installing freight and passenger elevators in the new county jail building to the WARNER ELECTRIC CO., at about $5,000.

BRONSON, ALA.—The Florida Power Co. is planning to construct a dam across the Withlacooche River, in the southern part of Levy County the power to be utilized to generate electricity, which will be distributed in several cities in Levy and adjoining counties, and also for use in the phosphate industry in those sections.

OSYKA, MISS.—Bids will be received by the Mayor and ;Board of Aldermen until Nov. 8 for furnishing materials and machinery for an electric light plant and water-works system. Estimated cost, $20,000. Plans and specifications can be seen at the office of the Mayor, Osyka, and at the office of Xavier A. Kramer, Engr., Magnolia, Miss.

SHELBYVILLE, TENN.—We are officially advised that contract for improvements to the water and light plant will not be let until some time in the winter. Noted on Oct. 27. The Solomon-Norcross Co., Atlanta, Ga., are Engrs.

BEREA, OHIO.—Contracts have been awarded as follows for equipment for the electric light plant: For a 325 HP. engine, 200 r.p.m., for direct connection to 250-KW. generator, to BUCKEYE ENGINE CO., Salem, Ohio, for a 250-KVA., a 150-KVA. and a 75-KVA. generator to S. K. ELLIOTT ELECTRIC CO., Cleveland, and a switchboard to the YOUNGSTOWN ARMATURE & CONSTRUCTION CO., Youngstown.

JACKSON, OHIO.—Bids were opened by the Trustees of Public Affairs W. A. Dallas, Clk., on Oct. 20, for furnishing material and enlarging and improving the municipal electric light plants. All bids were rejected and new bids will be asked.

AKRON, OHIO.—The Northern Ohio Traction & Light Co. is contemplating the construction of a large power-house in Akron or vicinity.

DAYTON, OHIO.—The directors of the Oakwood Street Ry. Co. are considering plans for enlarging the power plant.

YOUNGSTOWN, OHIO.—The contract for installing a switchboard in the new courthouse has been awarded to CALDWELL & DRAKE at $4,650.

GOSPORT, IND.—The Gosport Electric Co., it is reported, will soon ask for bids for the erection and installation of an electric light and power plant. C. K. Kiefer is Pres. Charles Abraham is Secy.

SAGINAW, MICH.—The Jackson & Church Co. is arranging for the erection of a new plant at Saginaw, consisting of a pattern shop, foundry, machine shop, finishing shop and several other buildings, including a separate power house. The plant will be equipped for electric motor drive throughout.

DETROIT, MICH.—Plans are being prepared by Malcomson & Higginbotham, Moffat Bldg., Detroit, for the construction of an auto lamp factory, 67 ft. × 200 ft., three stories high. A power plant will also be erected in connection with this plant.

ESCANABA, MICH.—The city is considering the construction of a municipal gas plant. The proposition to issue $30,000 of bonds will be voted upon on Nov. 8.

MILWAUKEE, WIS.—At the coming election the proposition to issue $550,000 of bonds for the erection of a municipal lighting plant will be voted on by the citizens. Charles J. Poetsch is City Engr.

SUN PRAIRIE, WIS.—The contract for the construction of a power station at the municipal electric light plant has been awarded to LISSUER & HASENFUS, Sun Prairie.

ELDORA, IOWA.—The Park Dam Co., Eldora, is preparing to begin work on the construction of a cement dam across the Iowa River here, and erection of a power house and electric system here. The company was recently granted a franchise to supply electricity in Eldora.

WEBSTER CITY, IOWA.—The construction of a new power station here to cost about $50,000 is under consideration.

*MARSHALLTOWN, IOWA.—Bids will be received until noon, Nov. 28, for the installation of machinery and water wheels for development of water power. O. L. Ingledue is Mayor.

AINSWORTH, NEB.—The Ainsworth Electric & Power Co., it is reported, is contemplating the extension of its transmission line to Long Pine, to supply electricity for lighting the railroad yards and business districts.

NORFOLK, NEB.—The city has engaged the W. K. Palmer Co., Engrs., 717-720 Dwight Bldg., Kansas City, Mo., to prepare plans and specifications for a municipal electric light plant here and for improvements to the city water-works system.

GEORGETOWN, TEX.—The electric light plant and water-works system here which were recently acquired by the city, bonds to the amount of $45,000 for the purpose having been voted, will be enlarged and improved.

TEXAS CITY, TEX.—The Texas City Transportation Co., has appropriated $500,000, for the installation of an electric light and power plant here and other public utilities for the town. The power plant will be of sufficient capacity to provide electric power for the electric loading and unloading cranes upon the wharves, the carrying system of the warehouses and factories and industries of the town and adjacent territory. Capt. A. B. Wolvino, Duluth, Minn., is Pres.

FORT WORTH, TEX.—The City Commission has ratified the purchase by J. R. Nutt, Cleveland, Ohio, of the electrical franchise and other holdings of the Fort Worth Light & Power Co., and the electric properties of the Fort Worth Gas Co. The contract by which he acquires these properties also provides for the immediate construction of a central hydroelectric plant with a capacity of 22,000 HP. and other improvements to cost $2,000,000. It is stipulated in the contract that the price for electric lighting current in Fort Worth shall be 10 cts. per KW. on a consumption of two kilowatts per hour, and 6 cts. per KW. on a consumption in excess of two kilowatts per hour. It is further provided that the city shall reserve the municipal lighting plant and may use it as it sees fit. The city is granted a rate of 4 cts. per KW. for the fire district and business streets and 3½ cts. for city lights in the residence districts. All the wires in the business part of town will be put under ground. Mr. Nutt agrees to install a system of street illumination at an estimated cost of $78,000, which shall become the property of the city upon its completion. The proposed system will carry Tungsten lamps. The present combined capacity of the power plants of the two companies, that of the Citizens' Electric Light & St. Ry. system is 4,000 HP. It is planned to provide power by the proposed central hydroelectric plant for operating the local electric railway system, the Northern Texas Traction Company's line that runs between Fort Worth and Dallas, the machinery of the two large meat-packing plants in North Fort Worth, and other industries of this city and adjacent territory. The plans submitted by Charles William Ricker, an electrical engineer, who represented Mr. Nutt in the transaction, have been formally approved by the City Commission. They involve among other things the construction of a dam across the Trinity River at which point the hydroelectric plant will be located.

HOBART, OKLA.—The city is considering plans for the installation of electric apparatus in the municipal pumping station, including a large motor.

ALBUQUERQUE, N. MEX.—The contract for the installation of an electric passenger elevator in the U. S. public building at Albuquerque has been awarded to the OTIS ELEVATOR CO., 17 Battery Pl., New York, at $5,274.

CHEHALIS, WASH.—The Twin City Light & Traction Co. will erect a new power house here.

SEATTLE, WASH.—Contracts have been awarded by the city to the AGUTTER-GRISWOLD CO. for the installation of cluster lights on Stewart St. and other streets, subdivision No. 1, at $12,972. R. H. Thomson is City Engr.

SPOKANE WASH.—The Board of Public Works has engaged W. E. Moore, Hydraulic Engr., as consulting engineer for the installation of a municipal electric light plant.

TACOMA, WASH.—Bids will be received at the office of the Commissioner of Light and Water until noon, Nov. 4, for furnishing 40,000 lbs. of copper wire f. o. b., Tacoma.

LOS ANGELES, CAL.—The RICHARDS NEUSTADT CO., Wright & Callender Bldg., Los Angeles, have secured the contract for constructing a foundation for transformer building, 115 × 62 ft., at Long Beach, for the Southern California Edison Co., at $11,550.

FRESNO, CAL.—The San Joaquin Light & Power Co., on Oct. 13, filed articles of incorporation at Fresno with the County Clerk. Capital stock, $25,000,000. The directors are: W. R. Durfew, Fresno; E. B. Waltfall, Fresno; A. R. Wishon, Coalinga; A. N. Kemp, Los Angeles; L. M. Farnham, Los Angeles. The head officers of the company will be at Fresno.

SAN FRANCISCO, CAL.—Bids will be received by Brigadier-Gen. Charles L. B. Davis, Corps Engrs., U. S. A., 726 Chronicle Bldg., San Francisco, until noon, Nov. 28, for electrical machinery on drawbridges across Tidal Canal, Oakland Harbor.

NEWPORT, CAL.—L. S. Wilkinson, City Clk., will receive bids until 7 p. m., Dec. 12, for a franchise to erect poles and uprights in public streets and alleys of city and to equip said poles with brackets cross-arms and other means and appliances for placing and stringing wire and cables for conveying and transmission of electric energy for light, heat and power.

GLOBE, ARIZ.—A. T. Smith has orgainized the Gila Valley Electric, Gas & Water Co. Capital $100,000. The company will supply power, light and water to towns near here. The first reservoir to be constructed will have a capacity of 100,000,000 gallons. The first unit of the electric plant will be of 500 HP.

F. L. Payne and Henry Mitchell, Phoenix, Ariz., have secured a 25-year franchise from the Board of Supervisors for developing water and electric power in the Winkleman District. A 100-ft. diversion dam is planned. A 12-in. pipe line will convey water to Winkleman. Several hundred horse-power will be developed in the electric plant.

TUCSON, ARIZ.—The City Council is considering increasing the water power at the municipal pumping station up the river. It is proposed to raise the dam and develop sufficient power to meet all the requirements of the city. Estimated cost from $100,000 to $150,000.

TEMPE, ARIZ.—Plans have been prepared for the Water Users' Association for equipment for an electric power plant near Tempe. A report has been submitted by L. C. Hill, Supervising Engr., for the reclamation service, under whose direction the plant will be installed. Extensive changes and enlargements of the distributing canal system are contemplated by the association. A new canal is to be built from Scottsdale to a point opposite Tempe, where the electric power plant is to be located.

NIAGARA FALLS, ONT.—The Symmes Construction Co. is considering plans for the construction of a power plant in the Porcupine mining district of Northern Ontario, to be located at Sandy Falls, on the Migogoni River. From 6,000 to 8,000 HP. will be developed.

WESTON, ONT.—The Council it is reported is considering the construction of a substation to utilize the energy furnished by the Hydro-Electric Power Commission here.

OTTAWA, ONT.—The project of constructing a dam in the St. Lawrence River at the Long Sault for power development is again being considered. Messrs. Holgate, Rickey and Buell, representing the Long Sault Development Co., are negotiating with the engineers of the Departments of Public Works, Railways and Canals and Marine regarding this work. No plans have been filed.

WINNIPEG, MAN.—Bids will be received until Dec. 7, by the Board of Control, M. Peterson, Secy., for overhead wire and cables for the electrical distribution system of the city's plant. Smith, Kerry & Chase are Engrs., Toronto, Ont. and Winnipeg.

WINNIPEG, MAN.—The contract for supplying 5,000 lbs. of No. 6 waterproof copper wire, 3,000 lbs. of No. 8 waterproof copper wire and five miles of galvanized iron wire with waterproof insulation has been awarded to the E. F. PHILLIPS ELECTRIC WORKS, Winnipeg.

LETHBRIDGE, ALTA.—Bids will be received until Nov. 5, for supplying and erecting of electric light fixtures for the asylum building, jail building and court house. John Stocks is Deputy Minister Pub. Wks., Edmonton.

MILLTOWN, N. B.—Preparations are being made for the installation of a 400-HP. electric plant at the St. Croix Mill to furnish electricity for operating the new machinery in the dyeing department and for lighting.

SWIFT CURRENT, SASK.—Contract for the power house and settling basin here has been awarded to LAIDLAW & McDONALD, Fort William, Ont., at $15,921 and $4,499, respectively. E. J. Brown & Co., Swift Current, bid $17,500 and $6,037. Contracts "E" for pumping machinery, "F" for electrical machinery, and "G" for producer gas plants were awarded to CHAPMAN & WALKER, Toronto, at $8,650, $16,650 and $25,000, respectively.

HOSTOTIPAQUILLO (Jalisco), MEX.—The Amajac Mines Co., Hostotipaquillo, has awarded contract to the CHAPALA HYDRO-ELECTRIC & IRRIGATION CO., Guadalajara, Mex., for electrical power to the amount of 200 HP., to operate its mill, and also has taken an option on 300 HP. additional for future needs. The transmission line of the Chapala Hydro-Electric & Irrigation Co. will be extended to this district.

YOQUIVO (Chichuahua), MEX.—The Yoquivo Development Co., is developing water power with the view of installing a hydroelectric plant at its mines here. The new plant will provide power for operating the mills at double their present capacity and also to operate the drills and ore cars in the mines.

EL ORO (Mexico), MEX.—The Compania Minera Oro Nolan, El Oro, will install a complete electrical equipment for operating its machinery. The present steam compressor will be equipped with a 75-HP. motor and a number of smaller motors will be installed for the crushers, ventilators and other machinery. The large pump will be driven by a 100-HP. motor. Transformers and a complete lighting equipment will also be installed. The company will obtain its power from the transmission line of the Mexican Light & Power Co., city of Mexico.

CANELAS (Durango), MEX.—Roger B. Chase will install a 100-HP. hydroelectric plant at his mines near here to provide power for operating the machinery on his property, including the reduction mill. He will construct a storage reservoir and canal for the purpose of obtaining the necessary water power for the proposed plant.

BRIDGES.

(* *Denotes that this work is advertised in Engineering News.*)

WHITE RIVER, VT.—The contract has been awarded to CHARLES E. WALBRIDGE, Plymouth, N. H., for the reconstruction of the bridge over the White River.

WATERTOWN, N. Y.—Bids for the erection of a drawbridge at Chaumont, over Chaumont Creek, were received by H. S. Ball, County Supt. of Highways. The contract for the bridge has been awarded to the SCHERZER LIFT BRIDGE CO., Chicago.

NEW YORK, N. Y.—Bids will be received by the Department of Parks until 3 p. m., Nov. 17, for repairing three bridges in Forrest Park, Boro. of Queens. Charles B. Stover is Pres.

NEW YORK, N. Y.—The following bids were received for the construction of the toll houses, police shelters, electrical works, &c., of the Queensboro Bridge over the East River between the Boros of Manhattan and Queens: Charles Wille, Woodside, L. I., $30,439; Wm. Werner, $40,797; John A. Shean & Co., Inc., $42,700; Lord Construction Co., $37,482; Kelly & Kelly, Inc., $52,940; J. I. Valentine, $45,300; Charles Meads & Co., $32,300; J. M. Knopp, $35,924; Louis Wechaler, $34,870; Snare & Triest, $37,520; Cortland Eng. Co., $39,475; Northern Const. Co., $39,860; Geo. W. Pratt, $36,425; Cooper & Evans Co, $37,437; William Horne Co., $38,900; Concord Construction Co., $36,493. Chas. P. Chase, Clinton, Iowa, Engr.

ALBANY, N. Y.—See item under Miscellaneous Contracts: "Barge Canal."

YONKERS, N. Y.—See item under Streets and Roads.

CAPE MAY C. H., N. J.—County Freeholders have directed the engineer to prepare plans and specifications for the construction of the drawbridge over Grassy Sound Channel, at Holly Beach.

TRENTON, N. J.—The cons on of a bridge at Stockton St., to repl he present old one, has been decided u County Engineer Eppell has been or to prepare plans and specifications.

PHILADELPHIA, PA.—Bids ved for the construction of elevated br between Somerset St. to Trenton Ave., as follows: American Bridge Co., Bldg., Philadelphia, Pa., $125,429; Le Shoemaker, 712 Harrison Bldg., elphia, Pa., $139,246; The Penna Steel Morris Bldg., Philadelphia, Pa., $14 Owega Bridge Co., 412 Arcade Bldg., elphia, Pa., $159,567; Phoenix Bridge Walnut St., Philadelphia, Pa., $1 Mc-Clintic-Marshall Construction Potts-town, Pa., $129,850.

SOMERSET, PA.—Bids were ved at the office of the County Comm rs on Oct. 26, for the construction everal bridges, and the contract has b arded to FERRIS BRIDGE CO., Pittsbu

CARLISLE, PA.—The constru of a bridge over Yellow Breeches Cr New Cumberland is contemplated by n E. Hertzler, Samuel L. Eppley an William Martin, Commissioners of C erland County.

HARRISBURG, PA.—The constr on of the proposed bridge at Thirteenth will be taken up by the City Engineer th the Reading Ry. officials. The city d an appropriation of $25,000 for this bri , and the railway will also pay $25,000.

WILKES-BARRE, PA.—The con t for the construction of the Plymouth Bri e has been awarded to THE PENN BRI E CO. at $276,973.

WASHINGTON, PA.—Bids will be received by the Council of Deemston Boro, Pa., for the construction of abutments of a bridge located on Plum Run. Plans and specifications at the office of A. J. Leonard, Secy., Beallsville, Pa.

WESTERNPORT, MD.—The city will construct a bridge over George's Creek. William Harvey is City Engr.

ISLE OF WIGHT, VA.—Bids will be received at Clerk's Office, Isle of Wight, until noon Nov. 7, for the construction of concrete bridge spanning Great Swamp. Plans and specifications at the office of Clerk of Circuit Court, Isle of Wight, Va.

DAUPHIN ISLAND, ALA.—The construction of a bridge costing $500,000 is contemplated by the Dauphin Island Railway & Harbor Co, to connect Dauphin Island with the mainland. George T. Bishop, Pres., Cleveland, O.; J. M. Dewberry, Secy., Birhingham, Ala.

GREENWOOD, MISS.—A bridge will be constructed by Le Flore County near the convict farm; also an iron bridge at Stevens Mill, and steel drawbridge over Tallahatche River, at Shell Mound.

YAZOO CITY, MISS.—The construction of a bridge over Tehevah Creek, over Bayou in Beat 4 and over Persimmon Bayou, has been decided upon. Contracts will be let Nov. 7. S. S. Griffin is Clk. Board of Supervisors.

NEW ORLEANS, LA.—The Penn Bridge Co., Beaver Falls, Pa., was the low bidder for repairing swing bridge on Hagan Ave. over new basin canal, at New Orleans, at $13,960. W. J. Hardee, City Engr.

HARLAN, KY.—J. S. Forester, County Judge, Fiscal Court, has appropriated $15,000 for the construction of a steel bridge spanning Clover Fork.

LEXINGTON, KY.—Lexington & Eastern Railway, J. E. Willoughby, Ch. Engr., Louisville, Ky., will, it is reported, construct about 17 bridges across the north fork of the Kentucky River.

DEFIANCE, O.—JOHN ROCK, Defiance, has been awarded the contract for the erection of the structure of the Frances St. bridge.

CLEVELAND, OHIO.—Bids will be received by John F. Goldenbogen, Clk. Bd. of Comrs. of Cuyahoga County, until 11 a. m., Nov. 16, for the elimination of the grade crossing of the Pennsylvania and W. & E. L. railroads. Plans at the office of the County Audr., Old Court House.

CLEVELAND, OHIO.—See item under Miscellaneous Contracts: "Elimination of Grade Crossings."

CINCINNATI, OHIO.—Plans and estimates are being prepared by City Engineer Shipley for the construction of a concrete bridge connecting Delta Ave. and Hoge St.

COSHOCTON, OHIO.—The Board of Commissioners of Coshocton County rejected all bids for the construction of the Jacob Balo concrete bridge in Virginia Township. Work will be readvertised.

DELAWARE, OHIO.—Bids will be received by W. H. Bodurtha, Audr. of Delaware County, until noon, Nov. 7, for the construction of the substructure of the Ferson bridge in Orange Township.

FINDLAY, OHIO.—No contracts were awarded by the Board of Commissioners of Hancock County for the construction of a retaining wall in Liberty Township, and bridge No. 571. Bids will be called for.

JEFFERSON, OHIO.—Bids will be received by A. V. Hillyer, Clk. of Board of Commissioners of Ashtabula County, until 1 p. m., Nov. 7, for the construction of a retaining wall and facing of wing wall at Brown bridge, over Connecticut Creek, in Conneaut Township.

MARIETTA, OHIO.—Bids will be received at the office of the County Commissioners of Washington County, until noon, Nov. 9, for the erection of various bridges. Hammond Burton, Audr.

PLYMOUTH, IND.—Bids are being received by County Commissioner for the construction of the Steel Brownlee Bridge to be erected across the Yellow River. Engr., Percy B. Troyer, Court House, Plymouth.

CONNERSVILLE, IND.—The Board of Commissioners of Fayette County have awarded contracts for the construction of four reinforced concrete bridges. Three

bridges HURST & THOMAS, Conners-
ville; 20-ft. span bridge to WILK &
CO., Ru ille, Ind. Karl Hanson, Engr.

SHEL ILLE, IND.—The Board of Com-
mission of Shelby County have awarded
contract for the construction of bridges.
Fox F and Honey Creek bridges to the
NATION CONCRETE CO., 804 Traction
Termin Bldg., Indianapolis; Kings Ford
bridge, the ATTICA BRIDGE CO., At-
tica, In W. H. Isley is Engr.

DETR MICH.—See item under Man-
ufactur Plants.

WELL MICH.—The construction of a
concret idge spanning the Escanaba River
is cont ated by the Delta County author-
ities. mated cost is $40,000.

DETR MICH.—The Common Council
has aw the contract to the DETROIT
BRIDGE STEEL WORKS for the construc-
tion of eel bridge over M. C. R. R., at
14th Av at $33,052.

ESCA A, MICH.—The construction of a
bridge the Escanaba River at Wells is
under deration in Delta County. The
estimate ost is $40,000.

SIBLE ILL.—BURNHAM & IVES CO.,
Blooming Ill., have been awarded the
contract the construction of five rein-
forced co rete bridges in Sullivan Town-
ship. Fr H. Frederking is Town Clk.

JOLIET, ILL.—The construction of a $30,-
000 railro and vehicle bridge spanning the
Desplaines River is contemplated. Hubert
A. Stevens is City Engr.

ROCKFORD, ILL.—No bids were received
for repair g State St. bridge over Rock
River. S. Hand is City Engr.

CEDAR APIDS, IA.—Plans are being pre-
pared by the engineers, Hedrick & Cochrane,
Curtiss Bldg., Kansas City, Mo., for a con-
crete bridge. Estimated cost, $135,000.
Percy P. Smith, Comr. of Public Wks.

DES MOINES, IA.—The City Council has authorized George Dobson, City Engr., to prepare plans and specifications for the placing of the bridge over the Racoon River, at First St. and Seventh St..

MOUND CITY, KAN.—Bids will be received by the Board of Commissioners, Linn County, until noon, Nov. 10, for the construction of four bridges. Geo. W. Waymire is Co. Clk.

TOPEKA, KAN.—The contract for the completion of the extension of the Melan Bridge has been awarded to J. O'CONNER & SON, Kansas City.

JEFFERSON CITY, MO.—Plans and specifications are being prepared by Engineer E. F. Harding for the Board of County Commissioners for the construction of three steel and concrete bridges. C. A. Diercks is County Clk.

KANSAS CITY, MO.—Plans have been completed for the Kansas City Terminal Ry. Co., J. V. Hanna, Ch. Engr., for the construction of a reinforced concrete viaduct at Chestnut St. and Belt Line.

NEW BLOOMFIELD, MO.—Plans will be prepared by W. R. Divers, Fulton, for the Board of Commissioners of Callaway County, Fulton, Mo., for a concrete and steel bridge at New Bloomfield. W. R. Taylor, Co. Clk.

ST. JOSEPH, MO.—The Board of Public Works have received estimates and plans from the Consolidated Engineering Co., Omaha, Neb., for the construction of the proposed viaduct and subways in South Sixth St.

GUTHRIE, OKLA.—The Texas, Oklahoma & Eastern Ry. has been chartered with a capital of $200,000 to build from Valliant to Idabel. The incorporators are Hans Dierks, Harry Dierks, James Kirkpatrick and S. M. McCarty.

PORTLAND, ORE.—The contruction of a high bridge over the Williamette River at Meade St. is contemplated.

PORTLAND, ORE.—Plans and specifications are being prepared by City Engr. Morris for the construction of a bridge spanning the Willamette River with approaches located at Ellsworth St.

WINTERS, CAL.—A concrete bridge is planned by the supervisors to replace the bridge over the Chicahominy Creek.

KENNETT, CAL.—Bids will be advertised for in a few days by the Board of Supervisors for the construction of a new bridge across Squaw Creek. The bridge is to be three spans and 120 ft. in length, with concrete abutments.

SAN ANDREAS, CAL.—Bids will be received by the Clerk of the Board of Supervisors of Calaveras County, until 11 a. m., Nov. 7, for the necessary repairs, including furnishing of material and labor upon the Joint County bridge spanning the Mokelumne River.

SAN DIEGO, CAL.—Plans have been prepared by the City Engineer for the construction of the foot bridge over the Spruce St canyon, between Brant and Front Sts. The structure will be 400 ft. in length.

SAN FRANCISCO, CAL.—It has been announced by the engineering department of the Southern Pacific Ry. that plans have been prepared by the Sacramento Southern R. R. for the construction of a bridge over the San Joaquin River.

SANTA ANA, CAL.—The Council has instructed the City Engineer to prepare plans for a new bridge on West 5th St., near crossing of Pacific Electric Road.

LOS ANGELES, CAL.—The contract for constructing a concrete arch bridge and dirt fill bridge over the Arroyo Seco at Pasadena Ave. to the MERCEREAU BRIDGE & CONSTRUCTION CO., at $118,750.

SONORA, CAL.—The contract has been awarded to JOHN MORGAN to rebuild the county bridges across Ros Creek, one leading to Jupiter District, and the other to Knight's Creek and Gold Crater.

QUEBEC, QUE.—Plans for the construction of the bridge which is to join Quebec to Limoilou over the River St. Charles have been completed and submitted to L. A. Taschereau, Minister of Public Works. The proposed bridge will consist of two car tracks, two foot passenger tracks, and two carriage-ways. L. A. Valle, Provincial Public Works Engr.

WALLACHIN, B.C.—Bids will be received until Nov. 28 by Public Works Department, Victoria, for erection of superstructure of steel bridge spanning the Thompson River near Wallachin; also for erection of substructure for same bridge.

BUILDINGS.

(* *Denotes that this work is advertised in Engineering News.*)

ELLSWORTH, ME.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., Dec. 7, for the extension, etc., (including plumbing, gas piping, heating apparatus and electric conduits and wiring) of the U. S. post office and custom house at Ellsworth.

BOSTON, MASS.—Plans have been completed for the proposed municipal zoological garden at Franklin Park and aquarium at City Point. The estimated cost of the latter is $100,000, while the cost of the entire project is placed at $240,000. Edmund Putnam is Park Comr. Harry L. Whitney is City Engr.

EAST WATERTOWN (Watertown Post-Office), MASS.—The Hood Rubber Co. has placed a contract with the ABERTHAW CONSTRUCTION CO., 8 Beacon St., Boston, to build at East Watertown, a reinforced-concrete warehouse, 380 × 100 ft.

BOSTON, MASS.—The following bids were received on Oct. 19, by E. F. McSweeney, Chn., Consumptive Hospital Trustees, Tremont Bldg., Boston, for the proposed Domestic Administration building. The contracts were awarded on Oct. 27: J. E. LOCATELLI CO., INC., 46 Cornhill St. (awarded contract), $60,387; Other bidders were: John F. Griffen & Co., $61,817; Charles F. Brown, $66,716; Woodbury & Leighton Co., 166 Devonshire St., $69,412.

For installing heating system in the hospital: Contract awarded to J. J. HURLEY & Co., 2 Columbia St., $5,046; Other bidders were: Pierce & Cox, $5,233; James P. Dwyer, $5,300; Albert B. Franklin, $5,391; Brian & Brown, $6,012.

For installing electrical work: Contract awarded to EDWIN C. LEWIS, INC., 121 Federal St., $8,239; Other bidders were: Alfred J. Hixon, $8,731; Lord Electric Co., $8,820; Barnes-Pope Electric Co., $9,380.

For installing plumbing system: Contract awarded to PIERCE & COX., 143 Kingston St., $4,632. Other bidders were: Wells & Newton, $4,951; John O'Connell, Inc., $5,150; Robert F. Brown, $5,519.

NEW YORK, N. Y.—Schwartz & Gross, Archs., 347 Fifth Ave., have completed plans for the 8-story apartment house, 100 × 87.2 ft., on the south side of 83d St., 225 ft. east of Columbus Ave., to cost $400,000. The Henessy Realty Co., 220 Broadway, is the owner. Robert Moss, 126 Liberty St., is Consult. Engr.

The mason contract has been awarded to THOMAS MULLIGAN, Shakespeare Ave. and 172d St., for the 12-story elevator apartment house to be erected at the northwest corner of West End Ave. and 82d St. by Harry Schiff, 320 West 113th St. The building will be 102 × 89 ft., and will accommodate nearly 100 families. D. E. Waid, 1 Madison Ave. is the Arch.-in-charge. The cost of the building is estimated at about $550,000.

NEW YORK, N. Y.—Estimates will soon be received for the 5-story residence, 89.11 × 24.10 ft., which Robert A. Chesebrough, 56 East 49th St., will erect on the southwest corner of Madison Ave. and 71st St., at a cost of $80,000. Albert J. Bodker, 27 West 32d St., has completed the drawings.

Plans have been completed for a 6-story business building at Fifth Ave. and 56th St. for Woodbury G. Langdon. The proposed building will have a frontage of 50 ft. on the avenue and a similar frontage on the street. It has been designed by Trowbridge & Livingston, Archs., 527 Fifth Ave., for offices, lofts and warerooms, with facades of granite, costing about $200,000.

Plans have been filed with Rudolph P. Miller, Bldg. Supt., for erecting a 6-story private residence on the south side of 70th St., 125 ft. east of Madison Ave., for Edwin S. Bayer, at a cost of $50,000. The building will have a frontage of 25.6 ft. and a depth of 74.3 ft., with a 4-story and messanine rear extension. The facade will be of brick with limestone trimmings in the French Renaissance style. Laura K. Bayer is the owner of record. Taylor & Levi, 105 West 40th St., are the Archs.

Shampan & Shampan, Archs., 722 Broadway, Brooklyn, are drawing plans for a 6-story bank and office building, to be erected on a plot, 50 × 75 ft., at the northwest corner of Graham Ave. and Siegel St., Brooklyn, for A. L. Kass. The building will be of Ionic type of architecture and finished in Indiana limestone and terra cotta.

Charles E. McManus, 45 East 42d St., has purchased a plot, 100 × 100 ft., at the southwest corner of Seventh Ave. and West 54th St., and plans to construct a 5-story flathouse and six 3-story dwelling houses. Neville & Bagge, Archs., 215 West 125th St., prepared the plans.

NEW YORK, N. Y.—Plans have been prepared by Carrere & Hastings, Archs., Fifth Ave. and 26th Sts., for a 5-story American basement residence of granite and limestone, 47 × 100 ft., for William Starr Miller, at the corner of 86th St. and Fifth Ave.

Plans have been filed for a 6-story brick elevator apartment house at the northwest corner of Edgecombe Ave. and 165th St., 80.9 × 140.3 ft. on the street, to house 61 families. The Sun Construction Co., 1400 Fifth Ave., is the owner. Gronenberg & Leuchtag, 3 West 22d St., are the Archs. Estimated cost, $135,000.

Lew Fields, the theatrical manager and Edward Margolies, 44 West 34th St., have acquired property in 47th St., between Sixth and Seventh Aves., and will erect a business structure, on a plot, 100 × 200 ft., it is stated.

Plans were filed recently for a 12-story loft building to be erected at the southeast corner of Lafayette and Fourth Sts. The proposed loft building will have a frontage of 37.9 ft. on Lafayette St. and 120 ft. on Fourth St., with a facade of pressed brick, with Indiana limestone and terra cotta trimmings, and will be of fireproof construction. The Legal Realty & Mortgage Co. is the owner. Herbert Bros., 5 Beekman St., are the Archs. Estimated cost, $225,000.

NEW YORK, N. Y.—Bids will be received by C. B. J. Snyder, Supt of Schools, Dept. of Education, until 3 p. m., Nov. 14, for the general construction etc., of new Public School, No. 168, on the westerly side of Throop Ave., between Bartlett and Whipple Sts., Boro. of Brooklyn.

Bids are asked until 2.30 p. m., Nov. 11, by Michael J. Drummond, Comr., Dept. of Public Charities, for furnishing all the labor and materials required for the erection and entire completion of a new dormitory for female help at the Metropolitan Hospital, Blackwell's Island, the City of New York.

The following bids were received by Michael J. Drummond, Comr., Dept. of Public Charities on Oct. 25, for furnishing all the labor and materials necessary or required for all excavation, masonry, steel and iron work roofing, metal work, carpentry, glazing, painting, hardware, plumbing, heating work, refrigerating work, electric work, kitchen apparatus, fitting up fixtures and all other work for the erection and completion of an administration building, a surgical pavilion, a storage, kitchen and dining hall building, a service tunnel and covered corridor connecting buildings and a power house, ambulance and laundry building and also all plumbing, heating, refrigerating work, and electric work, kitchen apparatus, fitting up fixtures and the like for six ward pavilions (now under contract) situated on the property of the Department of Public Charities, New York City Farm Colony, Boro. of Richmond, City of New York: Luke A. Burke & Sons, 25 West 42d St., $1,075,000; John H. Parker, 42 East 23d St., $1,181,000; Thomas Dwyer, Marble Arch., $1,190,000; Thomas B. Leahy Building Co., 1 East 42d St., $1,133,337; George A. Fuller Co., 111 Broadway, $1,149,000; Cramp & Co., 25 East 26th St., $1,254,288.

NEW YORK, N. Y.—See item under Miscellaneous Contracts: "Bath-house."

ALBANY, N. Y.—Franklin B. Ware, State Arch., is preparing specifications upon which bids will be invited for painting and decorating the State Education Building, at Albany. The appropriation for this, together with book-stacks, electric wiring, fixtures, elevator and similar work, is $625,000.

MALONE, N. Y.—James Knox Taylor, Superv. Arch., Treasury Dept. Washington, D. C., has awarded to AMBROSE B. STANNARD, New York City, the contract for the construction of a post-office at Malone, at $45,700. Bids were received on Oct. 12 and noted on Oct. 20.

YONKERS, N. Y.—See item under Streets and Roads.

LONG BEACH (L. I.), N. Y.—M. C. MADSEN, of Long Beach, has received the general contract to erect a frame and stucco hotel building, four stories, 80 x 80 ft., for Joseph Huber, of the Huber Brewing Co., 1 Bushwick Ave., Brooklyn, to be erected here at a total cost of $60,000. Kirby & Petit, Archs., 103 Park Ave., New York, have prepared the plans.

BUFFALO, N. Y.—George Carvers Sons, dealers in Seeds, of Binghamton, will build a storage and distributing warehouse and elevator on a site recently purchased on the Buffalo River and Ganson St.

RAYBROOK, N. Y.—The following bids were received on Oct. 29 for the construction of the building for employees at the Hospital for Incipient Tuberculosis at Raybrook: Peter Keeler Building Co., Albany, N. Y., $64,700; Westchester Engineering Co., 103 Park Ave., New York, $65,900; A. Pasquini, New York, $35,300; Branch & Callanan, Saranac Lake, N. Y. F. B. Ware is State Arch.

DEPEW, N. Y.—The Loeser Bros. Co., dealers in woolen rags, 330 Howard St., Buffalo, has completed plans for a 2-story and basement warehouse, 82 × 100 ft., on the N. Y. Central R. R. Equipment of baling presses and binders will be installed.

DUNKIRK, N. Y.—The Local Corps of the Salvation Army is having plans prepared for a Salvation Army Home to be erected on a site recently purchased on East Third St.

ROCHESTER, N. Y.—The Home for the Friendless Association, Mrs. William Gormly, Pres., contemplates erecting a home building at East Ave. and Alexander St., to cost, approximately, $100,000.

ATLANTIC CITY, N. J.—The contract for erecting the proposed apartment house for Mrs. Elizabeth Barston, has been awarded to AUGUSTUS CRAMER, this city. It will be absolutely fireproof. Cost, $150,000.

JERSEY CITY, N. J.—We are officially advised that bids will be received until 9 p. m., Nov. 22, by the Board of Education, for constructing a 4-story fireproof brick and stone technical and industrial high school. Estimated cost of building is $600,000 and equipment $100,000., G. F. Ege is Secy. of Bd. John T. Rowland, Jr., 15 Exchange Pl., Jersey City, is Arch.

RED BANK, N. J.—J. H. Freedlander, 244 Fifth Ave., New York, has prepared plans for a terra cotta block and marble residence, 60 × 80 ft., for Andrew Freedman, 52 William St., New York, to be erected here, at a cost of about $40,000. Estimates will be received by the Architect on the general contract.

CARBONDALE, PA.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., Dec. 8, for the construction, complete (including plumbing, gas piping, heating apparatus, electric conduits and wiring), of the U. S. post-office at Carbondale.

HAZELTON, PA.—The contract for constructing an 11-story office building here for the Markle Trust Co., has been awarded to JAMES G. DOAG & CO., 1420 Chestnut St., Philadelphia. Estimated cost, $250,000.

PHILADELPHIA, PA.—The City Council is advancing Mayor John E. Reyburn's proposition to establish a new Central Manual Training School and a School of Technology, between 21st and 22d Sts., on the line of the Parkway and also the proposed Central Free Library Building, also on the Parkway between 19th and 20th Sts. A loan of about $5,000,000, was appropriated recently for these buildings together with many others.

WILLIAM R. BROWN, 2145 East Firth St., has been awarded the contract to erect four 2-story brick houses, 15 × 42 ft., each, on the west side of Sepvina St., south of Oakdale St., for Patrick Gallagher. Cost, $63,000.

PHILADELPHIA, PA.—Ballinger & Perrot, Archs. and Engrs., 1211 Arch St., have completed plans for an 8-story building, 50 × 100 ft., at the northwest corner of Twelfth and Race Sts., for Leo and Arthur A. Niessen.

Joshua M. Holmes, 160 West Luray St., is having plans prepared for ten 3-story houses, 16 × 50 ft. each, at Locust Ave. and Musgrove Sts. Estimated cost, $60,000.

Plans are being prepared by Anderson & Haupt, Archs., for forty-eight 2-story houses at 55th St. and Baltimore Ave., for F. H. Benham, at an appropriate cost of $100,000.

The Allegheny Improvement Co., plans the erection of 21 houses, 21 × 37 ft. each, on Somerset St., between 28th and 29th Sts., to cost about $84,000.

G. W. and J. M. Zane, 2234 West Lehigh St. will build 45 2-story houses on 24th St., north of Firth St., and on Sergeant St., west of 22d St., to cost $80,000.

H. P. SCHNEIDER, 3713 Old York Road, recently obtained permits for 33 2-story dwellings, each 16 × 50 ft., to be built at Sixth and Hunting Park Ave., at a cost of $56,650.

Louis Weber is having plans prepared for 80 3-story dwellings, 16 × 49 ft. each, on Tulpehocken St., east of Wayne Ave., to cost $360,000.

ARDMORE, PA.—Baily & Bassett, Archs., 421 Chestnut St., Philadelphia, are preparing plans for a 4-story apartment house, 48 × 135 ft., to be built in Ardmore for Frank H. Mahan. A site for the building, comprising about two acres, at Glenn's lane and Montgomery Ave., was recently purchased by Frank H. Mahan for a consideration of $60,000.

PITTSBURG, PA.—A 4-story stone and brick warehouse is to be erected at 29th St. and Liberty Ave., Sixth Ward, by HARMER D. DENNY, 811 Ridge Ave., Pittsburg. Cost, $64,000.

The DUQUESNE CONSTRUCTION CO., Bessemer Building, Pittsburg, has the contract to erect a church building at Allen Ave. and Prospect St., 18th Ward, for the Congregation of St. George's Catholic Church. The Rev. S. J. Schramm is Rector. Edmund E. Lang, House Building, is Arch. Cost, $150,000.

Bids are being received by the Trustees of St. Agnes' Roman Catholic Congregation for the erection of a brick school building, on Robinson St., Fourth Ward, which is estimated to cost $60,000.

PHILADELPHIA, Pa.—Albert Kahn and E. Wilby, Trussed Concrete Bldg., Detroit, Mich., have revised plans for the proposed 4-story and basement service building, 70 × 130 ft., for the Packard Motor Co., at Philadelphia. S. D. Waldon is Gen. Mgr., East Grand Boulevard, and Belt Line R. R., Detroit. Cost, $40,000.

The Northwestern Amusement Co. will erect a moving picture theatre at the southwest corner of 41st St., and Lancaster Ave., on a lot measuring, 66 × 172 ft. Estimated cost, $40,000.

BALTIMORE, MD.—The contract has been awarded to the ENGINEERING-CONTRACTING CO., St. Paul and Franklin Sts., for the erection of a garage at Third and Toone Sts., for the George Gunther, Jr., Brewing Co., 1211 South Third St. It will be two stories high, of brick and stone, 20 × 50 ft., with concrete flooring. Plans were prepared by Otto G. Simonson, Arch., American Bldg., Baltimore.

Plans and specifications have been completed by C. M. Anderson, Arch., 324 North Charles St., for the proposed addition to the J. S. Young branch of the MacAndrews & Forbes Co., at Boston and Elliott Sts. It will be a 2-story building of brick, granite trim, with slag roof, galvanized-iron cornice, plumbing, etc.

BALTIMORE, MD.—McLOUGHLIN BROS., INC., 916 Bolton St., have been awarded the contract for an alteration to the Caswell Hotel at Hanover and Baltimore Sts. for the Union Hotel Co. It will be of brick, with electric lighting, marble interior work, plumbing, stone and iron work.

WALTER E. BURNHAM, Law Bldg., Baltimore, has been awarded the contract for the erection of a residence at Charles St., Boulevard and 33d St. for Graffiin Cook, Maryland Trust Bldg., from plans drawn by Joseph Evans Sperry, Arch., Calvert Bldg. It will be of brick, with electric lighting, plumbing tile work, etc.

BALTIMORE, MD.—Plans are being prepared by B. Eustace Simonson, 315 Fifth Ave., New York, for the erection of a theater building at 408-10 East Baltimore St., Baltimore, for the Knickerbocker Amusement Co., of New York. It will be of Indiana limestone with terra cotta trimmings, and will cost more than $100,000, for construction alone.

The Pennsylvania R. R. Co., is having plans prepared for a steel shed, 100 × 700 ft., to be erected at the Union station at Baltimore, at a cost of $100,000. H. R. Leonard is Engr. of Bridges and Buildings, Philadelphia, Pa.

SILVER SPRING, MD.—The contract for erecting a 60-room hotel here, has been awarded to the S. I. BUSH CONSTRUCTION CO., of Harrisburg, Va. Rich and Fitzsimmons are the Archs.

WASHINGTON, D. C.—The Government plans the erection of three Department buildings as follows: The State Department Building is to have a ground area of 72,000 sq. ft. It will have 325 rooms, including a state dining room, two reception rooms and an international conference room: The Department of Justice Building with a ground area of 57,600 sq. ft., will contain 225 rooms. A feature of the law library: The Commerce and Labor Building, with 90,000 sq. ft. of ground area, the largest structure of all, will have 450 rooms, including an aquarium occupying 28,000 ft. of floor space and 75,000 sq. ft. for the Census Bureau. The structures will be erected just south of the Treasury Building.

ELM GROVE, W. VA.—The Building Committee of the First National Bank of Elm Grove has awarded the contract for its proposed building to BUSHON & LEHMEN, of Park View. It will be a 3-story structure.

TIFTON, GA.—The Board of Tift County Commissioners will receive bids until Nov. 22, for furnishing the material and erecting a court house, three stories high, 96 × 72 ft., with a reinforced concrete foundation, exterior walls of brick and stone, fireproof construction with slate roof. Plans were prepared by the Falls City Construction Co., of Louisville, Ky. M. Tucker is Chn. of Bd. Estimated cost, $54,000.

NEW ORLEANS, LA.—Lebenbaum & Marx, Archs., 72 Madison St., Chicago, Ill., have completed plans for an art museum, to be known as "Isaac Belgado Museum of Art." It will be of Greek classic architecture, two stories, 91 × 110 ft., to be erected at New Orleans. It will be of Bedford stone construction, with skylight roof, marble, mosaic and tile work, steam heating and art plaster. Estimated cost, $150,000.

COVINGTON, KY.—Shattuck & Hussey, Archs., 143 La Salle St., Chicago, Ill., are preparing plans for a Y. M. C. A. building, four stories high, 90 × 135 ft., at Covington. It is to be of steel and tile, fireproof construction. Estimated cost, $75,000. E. Fogg is Secy.

LEXINGTON, KY.—Plans for extensive improvements by the Chesapeake & Ohio Ry., and the establishment of metropolitan terminal facilities in Lexington are now under consideration by the officers of that road, and the project means the expenditure of approximately $200,000 on shops, roundhouses, office buildings and a railroad Y. M. C. A. F. M. Griffith, Covington, is Superv. of Bridges and Buildings.

CINCINNATI, OHIO.—Plans are being prepared by G. W. Drach, Arch., Union Trust Bldg., for the Hotel Gibson, on Walnut St., between Fourth and Fifth Sts. The structure will be erected on the site of the present Gibson House, and will be ten stories high, 123.5 × 190 ft. The project will involve an expenditure of about $1,250,000, it is stated.

COLUMBUS, OHIO.—The contract for erecting a garage and store rooms at the corner of Fourth and Spring Sts., has been awarded to D. W. McGRATH, new First National Bank Bldg., at $50,000. The improvement is being made by Dr. W. D. Hamilton.

GREENVILLE, OHIO.—Bids will be received until Nov. 9, by the Board of Education of Greenville, for the necessary labor and materials to construct a school house from plans prepared by Howard & Merriam, Capital Trust Bldg., Columbus.

*TOLEDO, OHIO.—Bids will be received until noon, Dec. 5, by the Clerk of the Board of Education, of the City School District, Toledo, for the erection of two high school buildings. George L. McHesson is Dir. of Schools. David L. Stine, is Arch., of the Bd.

INDIANAPOLIS, IND.—Bids will be received until Nov. 30, by the Board of Public Safety, for interior decorations, in the new City Hall building. The estimated cost is $20,000.

FRENCH LICK, IND.—The general contract for constructing a 7-story addition, 110 × 287 ft. to the hotel at French Lick Springs, for the French Lick Springs Hotel Co., of which Thomas Taggart is Pres., has been awarded to W. F. STILWELL, of Lafayette. The contract includes everything but the plumbing, heating, elevators, decorations and furnishings. Excavation work will begin soon and it is provided that the building shall be completed in eight months. The cost of the building, exclusive of decorations and furnishings, will be between $225,000 and $250,000. It will be of reinforced concrete construction. D. A. Bohlen & Son, Majestic Building, Indianapolis, are the Archs.

INDIANAPOLIS, IND.—A contract has been awarded by the Board of Public Works to the A. H. ANDREWS CO., 176 Wabasn Ave., Chicago, for the counter and grille work in the new city hall building, at $14,152. The estimate of the architects was $13,500, and the bids, aside from that of the successful bidder, were as follows: Newton & Holt Co., Chicago, $14,595; Aetna Cabinet Co., $15,500; Sander & Recker Furniture Co., $16,400, and the Indianapolis Grille Co., $17,625.

William L. Coons, 709 North Alabama St. has ordered plans on which to receive bids for the construction of a business building at the corner of Ft. Wayne Ave., Alabama and St. Clair Sts.

EAST CHICAGO, IND.—The WORDEN-ALLEN CO., Port Washington Rd., Milwaukee, Wis., has been awarded a contract for the erection of a building requiring 300 tons of structural steel for the Hubbard Steel Foundry, at East Chicago.

DETROIT, MICH.—R. H. Marr, Ford Bldg., will receive estimates about Dec. 1, on an 8-story and basement store and office building, 100 × 100 ft., for the Kiefer Land Co., care of the Architect. The building is to be located at Gratiot and Farrar Sts. and will be constructed of terra cotta, granite, stone, stock brick with composition roof, galvanized iron cornice, structural iron, hardwood finish and floors, and electric fixtures. Cost, $100,000.

DETROIT, MICH.—Albert Kahn and E. Wilby, Trussed Concrete Bldg., let the following contracts on Oct. 11, for the proposed fireproof store building, 3-stories and basement, for Edward S. George, 259 Woodward Ave.; Masonary to HORTON & STONER, Builders Exchange; Carpentry to VINTON & CO., 120 East Woodbridge St. The cost of the building is $50,000.

GRAND RAPIDS, MICH.—The Bradfield Engineering Co., Murray Bldg., has let the following contracts for the proposed 5-story and basement store and loft building, 100 × 100 ft., for the Hazelton & Perkins Drug Co., Ottawa and Lewis Sts.: General contract to HAUSER, OWEN & AMES, 102 North Ottawa St.; heating to CENTRAL BOILER & SUPPLY CO., 530 Canal St. Cost, $50,000.

*GRANITE CITY, ILL.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., Dec. 8, for the construction (including plumbing, gas piping, heating apparatus and electric conduits and wiring) of the U. S. post-office at Granite City.

CHICAGO, ILL.—J. Duncan, Arch., 87 Washington St., has awarded the plumbing contract to JACOB WEBBER for a $65,000 theater now under construction at Clark St. and Diversey Boulevard. Estimates for plastering, painting, mosaic work and ventilators are being received.

C. W. and George L. Rapp, Archs., 100 Washington St., have awarded the masonry contract to CHARLES CHAPMAN, for a 3-story mercantile building, 25 × 160 ft., at 2239 Michigan Ave., for J. G. Cottle. It will be reinforced concrete and steel fireproof construction, with steam heating, electric freight elevator and fireproof windows.

William F. Gubbins, Arch., Ashland Block, has awarded the sheet metal work to PERKINS BROS., for a 3-story building, 43 × 116 ft., at Ogden Ave., and Leavitt St., for the Hibernian Societies, to be known as the Emmett Memorial Hall, Estimates for plastering and painting are now being received.

Plans are being prepared for a 7-story mill constructed building on Throop St., between Congress & Harrison Sts., for Kestner & Hecht, 245 Jefferson St. The property was recently purchased from Stafford E. North by Frank A. Hecht. Estimated cost, $350,000.

MADISON, WIS.—The Sisters of St. Mary's plan to construct a hospital in Madison. Ground for the proposed structure will be broken in the spring. Cost, $75,000.

MILWAUKEE, WIS.—H. E. Briggs, Comr. of Pub. Wks., will receive bids until Nov. 18 for the erection of a fire engine house at Martin St. and Broadway, in the Seventh Ward. Separate bids are required on the eleven different branches of the work.

ST. PAUL, MINN.—The St. Paul Low German Society, Louis F. Schultz, Pres., is planning the construction of a club house in this city, large enough to accommodate all the German societies of St. Paul. Plans will soon be started. Gustav Behm, Albert Fritsche and others, are members of the Building Com. Estimated cost, $100,000.

ST. PAUL, MINN.—The State Board of Control, Charles Halvorson, Chn., are receiving bids for the construction of an engineering building at the State University, to cost $250,000; an anatomy building, to cost $200,000; and a medical building, costing $200,000. The plans were drawn by C. H. Johnston, State Arch., Capital Bank Bldg., St. Paul.

OMAHA, NEB.—Henry & Allen, implement dealers, have purchased a lot on the south side Jackson St., between Eleventh and Twelfth, for the purpose of erecting a 6 or 8-story building. R. L. Robinson is Mgr. Estimated cost, $100,000.

*MACON, MO.—James Knox Taylor, Supervising Arch., Treasury Dept., Washington, D. C., has awarded to M. YEAGER & SON, of Danville Ill., the contract for the construction of a post-office at Macon, at $56,643; time December 1, 1911. Bids were received on Oct. 10, and noted on Oct. 20.

BASTROP, TEX.—W. H. Grimes, County Clk., has purchased the residence property of P. O. Elzner, fronting the court-house square, and will erect on the same a hotel.

DENVER, COLO.—We are officially advised that the contract for constructing the proposed St. Mary's Academy for the Sisters of Loretto, at 14th Ave. and Pennsylvania St., has been awarded to JAMES STEWART & CO., First National Bank Bldg., Denver. Cost, $135,000. It will be of steel construction, with exterior walls of stone, brick and terra cotta and will be practically fireproof with a system of automatic sprinklers.

SEATTLE, WASH.—A 42-story building is to be erected at Second Ave. and Yesler Way, Seattle, by Burns Lyman Smith, 701 East Washington St. Syracuse N. Y. Estimated cost, $2,000,000. E. H. Gaggin, University Block, Syracuse, is Arch.

William Ringsley, Arch., Empire Bldg., has awarded the contract to the ART MARBLE CO., 2011 Second Ave., for the marble work in the proposed $300,000 Orpheum Theater building, at Third Ave. and Madison St. Fourteen different kinds of marble will be used. Cost, $45,000.

PORTLAND, ORE.—The general contract for building the Thompson Hotel, on Pine St., between Third and Fourth Sts., has been let to the LEONARD CONSTRUCTION CO. The cost is estimated at $650,000.

LOS ANGELES, CAL.—John C. Austin, Arch., Pacific Electric Bldg., has completed plans for the erection of four apartment houses for R. H. Howell, on West Seventh St. Estimated cost, $1,000,000.

The F. O. ENGSTRUM CO. 451 Colyton Ave., Los Angeles, has been awarded the contract for constructing the Exposition Building at Agriculture Park, for the State of California. The structure will cost about $175,000.

MONROVIA, CAL.—Bids will be received soon by the Board of Education for the construction of three buildings, to include a high school, grammar school and a manual training school. Allison & Allison are the Archs. Estimated cost, $125,000.

OAKLAND, CAL.—The Agents of the Levy Estate plan to construct a building at the southwest corner of Twelfth St. and Broadway, to cost $700,000.

SAN FRANCISCO, CAL.—The Jacob Z. Davis Estate Co., is receiving estimates on plans and specifications prepared by L. B. Dutton, Arch., Chronicle Bldg., for the proposed 8-story hotel at the southeast corner of Kearney and Sutter Sts. The property will be under the management of J. H. Van Horne. The building will cover the entire lot being 97.6 ft. in Sutter St. by 122.6 ft. in Kearney and running to Ver Mehr Pl. on the south. It will be of Class A construction with steel columns beams and girders and reinforced concrete floors making it an absolutely fireproof building throughout.

J. R. BOWLES 117 Geary St. has the contract to erect a 4-story and basement reinforced concrete building on a lot 137.6 × 250 ft., at Brannon and Sixth Sts., for the Deere Implement Co. Cost, $203,860.

A plot bounded by New Montgomery, Anna and Jessie Sts. and Rose Alley, which is owned by the Sharon Estate, has been chosen as the site for the proposed temporary City Hall. The Public Buildings Committee and the Board of Supervisors have approved the plans. It is to be a 6-story and basement structure. Marsden Manson is City Engr.

*SANTA CRUZ, CAL.—Bids will be received until 3 p. m., Dec. 5, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction (inncluding plumbing, gas piping, heating apparatus, and electric conduits and wiring) of the U. S. post-office at Santa Cruz.

SALT LAKE CITY, UTAH.—Dallas & Hedges, Archs., Deseret Bank Bldg., have been commissioned by the City School Board to prepare plans for the proposed 12-room school building on Eleventh South St., between Fifth and Sixth East Sts. A site of five acres has been purchased for this purpose.

LONG BEACH, CAL.—The general contract for erecting three buildings to be used for a polytechnic high school, has been awarded to L. S. ATKINSON, Byrne Bldg., Los Angeles, at $118,966. Bids were received on Oct. 18, by the Board of Education.

WHITTIER, CAL.—The $40,000 city hall bonds, we are offcially advised failed to carry. Noted on Oct. 20.

MONTREAL, QUE.—The Transportation Co., Ltd., has taken out a permit for the erection of a 10-story building, costing $1,000,000 on St. Francis Xavier St. PETER LYALL & SONS, 88 King St., are the general contractors.

GUELPH, ONT.—The contract to erect the proposed Canadian Pacific Ry. depot here, has been awarded to WELLS & GRAY. Construction will start at once.

WINDSOR, ONT.—C. Howard Crane, Ford Bldg., Detroit, Mich., let the following contracts on Oct. 15, for a 2-story automobile garage, 25 × 100 ft., for H. Trumbull, of Windsor. Masonry to THOMPSON BROS.; carpentry to W. WALLACE; composition roofing, heating and plumbing to BLACKMAN & CO.; painting to O. GRANDMAISON, all of Windsor.

TORONTO, ONT.—K. McWhinney plans the construction of twenty-six 2-story concrete block houses on Laughton Ave., near Davenport Road, to cost $46,800.

The Canadian Pacific Ry. Co. is planning the construction of an office building adjoining the King and Yonge St. office. James Osborne, Toronto, is Gen. Supt.

WINNIPEG, MAN.—Charles E. Coling has completed plans for a 6-story business block, the basement of which will be used as a publishing house for the "Live Wire."

NORTH BATTLEFORD, SASK.—The Provincial Government has decided to locate the Provincial Aslyum here, on a site on the banks of the Saskatchewan River. Hon. Walter Scott is Premier and Minister of Public Works, Regina, Sask.

WATER SUPPLY—IRRIGATION

(** Denotes that this work is advertised in Engineering News.*)

PORTLAND, ME.—The New Hampshire Water & Electric Power Co., has been incorporated to install, maintain and operate water-works, reservoirs, &c.. Capital, $200,000. C. E. Gurney is Pres., J. H. Ridge is Treas., Portland.

NORTHAMPTON, MASS.—The Water Commissioners are considering the construction of a new reservoir. Estimated cost, $250,000. M. D. Patterson is City Engr.

MILLIS, MASS.—The town proposes to lay this fall 10,600 ft. of 6 and 8-in. pipe and to set twelve hydrants.

WEST BROOKFIELD, MASS.—The town is considering the construction of a pneumatic water system.

FORT GREBLE, R. I.—Bids will be received until Nov. 16 by Lieut. Rodney H. Smith, Constr. Q. M., U. S. A., Fort Adams, for constructing a reinforced concrete 1,000,000-gallon reservoir at Fort Greble.

EAST HARTFORD, CONN.—The East Hartford Fire District has awarded contract to the A. W. BRYNE CO., Hartford, for the construction of the pipe line from the Glastonbury reservoir to the bridge in Burnside.

*FORT TERRY, N. Y.—The only bid received on Oct. 25 by Capt. F. T. Arnold, Constr. Q. M., U. S. A., New London, Conn., for the construction of a pumping station, including frame building, pumps, gasolene engine, surface wells and connections, etc., here, was that of M. L. Bayard & Co., 715 Bulletin Bldg., Philadelphia, Pa., at $9,850.

TROY, N. Y.—The Board of Public Works is considering the extension of water mains in Spring Ave. to Linden Ave. Estimated cost, $7,500. Edwin L. Grimes is City Engr.

NEW YORK, N. Y.—The State Water Supply Commission, on Oct. 26, approved the deep-rock pressure tunnel under the Borough of Manhattan for the distribution of the water from the new Catskill Aqueduct. The Board of Estimate has already approved the tunnel. The tunnel will run for the entire length of Manhattan at an average depth of 200 ft. Estimated cost, $25,000,000.

*FREEHOLD, N. J.—Bids for pumping equipment will be received until 11 a. m., Nov. 14, by the Board of Commissioners, addressed to Alex. L. Moreau. [illegible] Charles H. Butcher is Clk.

*BROOKVILLE, PA.—Bids will be received by the Brookville Water Co. until 6 p. m., Nov. 19, for furnishing materials and constructing a dam and reinforced concrete settling basin. Approximate quantities: 2,150 yds. earth excavation; 30 yds. rock excavation; 1,510 yds. embankment; [illegible] yds. rubble concrete; 526 yds. reinforced concrete; 208 yds. plain concrete; 340 yds. slope paving; 230 ft. of 12-in. c.-i. [illegible] George W. Heber is Secy.

BALTIMORE, Md.—The Water Board and Alfred M. Quick, Water Engr., have recommended, it is reported, an appropriation of about $200,000 for an extra [illegible] at Mt. Royal pumping station.

*WASHINGTON, D. C.—Bids are asked by the District Commissioners until 2 p. m., Nov. 9, for furnishing c.-i. water pipe and water pipe specials.

WELLSBURG, W. Va.—The following bids were opened on Oct. 17 for a 6,000,000-gallon tank and flywheel pumping engine: (a) 36-in. stroke, (b) 30-in. stroke: Allis-Chalmers Co., Milwaukee, Wis., (a) $19,850, (b) $16,900; Canton Hughes Pump Co., (a) $18,460, (b) $16,900; Snow Pump Co., (a) $16,890, (b) $14,800; Platte Iron Works, (a) $13,850, (b) $12,710; Prescott Pump Co., (a) $15,120, (b) $14,500.

WHEELING, W. VA.—The Board of Control has awarded the contract for 3,026 ft. of 8-in. and 3,700 ft. of 6-in. c.-i. pipe for the new water system on Wheeling Heights to the MASSILLION CO., Massillon, Ohio. The pipe will amount to about [illegible] tons, to be furnished at $23 per ton. Special fittings are to be furnished at $55 per ton. The contract for hauling and distributing the pipe has been awarded to JOSEPH REASE & SONS, at 83 cts. per ton.

*PARKERSBURG, W. VA.—We are officially advised that contracts have been awarded by the Board of Affairs for waterworks improvements as follows: Contract 7, for superstructure for pump station to W. M. CHISHOLM & SON, 331 Fourth Ave., Pittsburg, Pa., $11,060; Contract 8, radial brick chimney, ALPHONS CUSTODIS CHIMNEY CONSTRUCTION CO., New York, $1,325; Contract 9, laying c.-i. water pipe, W. M. CHISHOLM & SON, Pittsburg, $5,623; Contract 10, c.-i. water pipe and specials, U. S. CAST IRON PIPE & FOUNDRY CO., 348 Sixth St., Pittsburg, $15,831; Contract 11, gate valves and boxes, etc., LUDLOW VALVE MFG CO., 529 Third Ave., Pittsburg, $2,299. Frank Good is City Audr.

FAYETTEVILLE, N. C.—We are officially advised that John K. Strange, C. E., has been retained by the city to design and supervise the construction of a mechanical filter plant. Hazlehurst & Anderson, Consult. Engrs., Atlanta, Ga., and Wilmington, N. C., have also been retained to assist Mr. Strange on the design of the plant. Plans and specifications will be ready about Nov. 15.

CHARLESTON, S. C.—The City Council is considering the construction of a new water-works system. A resolution has been passed to appropriate the amount necessary for the employment of an expert water engineer to make an estimate of the cost and investigate the feasibility of the project. T. H. Dingle is City Engr.

WAYCROSS, GA.—The City Council is considering the installation of new pumping machinery at the water-works plant. Estimated cost, about $7,500.

SARASOTA, FLA.—The city is considering issuing $20,000 of bonds for waterworks and sewerage improvements. J. Louis Houle is City Clk.

MOBILE, ALA.—Wright Smith, City Engr., has prepared plans for the extension of the water mains. Estimated cost, $341,000.

YAZOO CITY, MISS.—Yazoo County will drill an artesian well. Bids are asked until Nov. 9. S. S. Griffin is Clk. of Supervisors, Yazoo City.

OSYKA, MISS.—See item under Light and Power Plants.

PATERSON, LA.—The town will construct a water system. Bonds for $30,000 have been sold.

PITTSBURG LANDING, TENN.—Bids are asked until Nov. 21 by Maj. G. G. Bailey, Ch. Q. M., U. S. A., Candler Bldg., Atlanta, Ga., for the installation of a water supply at Shiloh National Cemetery, here.

CINCINNATI, OHIO.—The Board of Public Service is considering the erection of four water tanks with a combined capacity of 1,500,000 gallons to supply the western hills district of the city. F. H. Shipley is City Engr.

CANTON, OHIO.—The city will spend about $125,000 for water-works improvements, to include standpipe, extension of mains, etc. Contract will be let about Dec. 15. L. B. Ohliger is Supt. W. W. Ray F. Harbert is Dir. Bd. Pub. Ser.

CLEVELAND, OHIO.—The City Council, on Oct. 17, passed an ordinance authorizing an expenditure of $100,000 for pipes and special castings. Robert Hoffman is City Engr.

LOWELLVILLE, OHIO.—J. Richard Kemmer, Consult. Engr., House Block, Pittsburg, Pa., has completed plans for a water supply system for this city with a daily capacity of 750,000 gallons. The supply is to be drawn from 90-ft. artesian wells at an elevation of 350 ft. above the city.

EAST LIVERPOOL, OHIO.—The report of the commission of three engineers, headed by J. Richard Kemmer, House Block, Pittsburg, to decide upon a system of water supply for this city, provides for the following: Duplicate centrifugal pumps to supply a filtering plant of eight filters with a combined normal capacity of 7,500,000 gallons daily. In connection with this an entire new pumping station is recommended, and a sub-standpipe [illegible] × 100 ft. for the supply of certain suburbs is suggested. With the present storage capacity of the reservoirs 7,250,000 gallons, an increase to double the capacity is included in the report as a necessity for the near future. The cost estimated for the work totals $505,630, as follows: Four cribs and wet [illegible], $60,989; pumping station and equipment, $117,774; sedimentation basin and coagulation tanks, $38,618; filter plant, $58,660; mains and distributing system, $122,042; storage reservoir, 15,000,000 gallons capacity, $91,049; standpipe pumping plant and equipment, $11,000; and duplicate lift pumps, $5,500. Installations recommended for immediate action total $344,827, as follows: Pumping station and equipment, sedimentation basin and coagulation tanks, filter plant, mains and distributing system, $113,275; standpipe, pumping plant and equipment, duplicate low lift pumps. The Council on October 26 decided to submit at the Nov. 8 elections, the proposition to issue bonds for $250,000 for the removal of the present pumping station to East End, to erect a new reservoir and extend the supply system to Pleasant Heights, Gardendale and other points; to issue bonds for $90,000 to install a mechanical filtration plant; and for $50,000 for the installation of the crib system of supply.

CANTON, OHIO.—Bids will be received by Ray F. Herbert, Dir. Pub. Ser., until noon, Nov. 10, for furnishing about 800 tons of c. i. pipe and ten tons of special castings as per specifications on file with the Superintendent of Water-Works Department.

DEFIANCE, OHIO.—The City is considering the construction of a municipal water plant. Carl Smith is City Engr.

AKRON, OHIO.—The proposed bond issue for $750,000 to build a new water-works plant was defeated on Oct. 25. John T. Payne is City Engr.

CINCINNATI, OHIO.—Bonds for $150,000 for water-works improvements were sold on Oct. 24.

EVANSVILLE, IND.—Bids for the pumping machinery for the new filtration plant have been received as follows: The Carpenter Co., $31,500, including girders, $3,000 additional; Allis-Chalmers Co., Milwaukee, Wis., $40,500; Worthington Co., Lockport, N. Y., $41,500; Holly Co., Lockport, $48,500.

BEECHER, ILL.—We are officially advised that the contract for laying water mains here has been awarded to T. H. Iglehart, Rookery Bldg., Chicago, Ill. Bids were opened on Oct. 22. J. E. Pickens is Engr., Kankakee, Ill.

CHICAGO, ILL.—The following contracts have been awarded in connection with the rebuilding of the 68th St. pumping station by B. J. Mullaney, Com. Pub. Wks.: Removing old and furnishing new boilers, to **BABCOCK & WILCOX CO.**, 567 West Lake St., Chicago, at $12,998; building new boiler foundations, etc., to **NASH DOWDELL CO.**, 145 La Salle St., Chicago, $9,000; remodeling north half of boiler room, to **JOHN L. O'BRIEN CO.**, at $27,562.

BLOOMINGTON, ILL.—The contract for laying water mains in McClan and Taylor Sts. has been awarded to **FRANK SULLIVAN**, Bloomington. Elmer Folsom, is City Engr.

BARRINGTON, ILL.—The Board of Local Improvements is considering the extension of water mains in Walnut St. to the village limits and the installation of a sanitary sewer system. William B. Ewing is City Engr.

NEWTON, IOWA.—The Council is considering the erection of a 100,000-gallon standpipe at the water-works plant. Estimated cost, $7,000.

SIOUX CITY, IOWA.—Bids will be received by the City Clerk until 9 a. m., Nov. 12, for the installation of a deep well and turbine and centrifugal pumping outfit. Specifications may be had from G. B. Healy, Supt. of Parks and Public Property.

MOORHEAD, MINN.—The City Council has decided to let contract for drilling 6, 8 and 10-in. artesian wells.

JEFFERS, MINN.—Bids will be received until Nov. 8 by J. W. Shaw, Village Recdr., for an 8-ft. dug well.

KINSLEY, KAN.—Bids will be received by Paul L. Noble, City Clk., until Nov. 7 for furnishing material and laying water pipe, with hydrants, valves, etc., approximately 2,500 ft. of 6-in. and 11,250 ft. of 4-in. c. i. pipe, eight hydrants and twelve valves.

MULVANE, KAN.—We are officially advised that bids were received as follows on Oct. 17 by the city for the construction of a municipal water plant. Contracts have been awarded as follows: Section 1, furnishing pipe and specials, to the **U. S. CAST IRON PIPE CO.**, 217 La Salle St., Chicago, Ill., at $9,187; Section 2, furnishing valves and boxes, to **IOWA MFG. CO.**, Oskaloosa, Iowa; Section 3, unloading, trenching, laying pipe, etc., to **LUND, KEENAN & McCARTY**, Ponca City, Okla., at $7,096; Section 4, for one 350-gallon per minute pump and motor, to **DEAN STEAM PUMP CO.**, Scarritt Bldg., Kansas City, Mo.; Section 5, for 25-HP. gasoline engine, to **JOHN DEERE PLOW CO.**, Chicago, Ill.; Section 6, for furnishing and erecting 50,000-gallon tank on 90-ft. tower, to **DES MOINES BRIDGE & IRON CO.**, Des Moines, Iowa, at $3,250. The J. S. Worley Co., Kansas City, Mo., is in charge of the engineering work.

WYMORE, NEB.—The City Engineer has reported to the City Council favorably concerning the installation of the proposed water-works system. Estimated cost between $[illegible],000 and $60,000.

NORFOLK, NEB.—See item under Light and Power Plants.

FORT CROOK, NEB.—Bids will be received until 11 a. m., November 4, by Lieut. A. W. Lane, Constr. Q. M., U. S. A., for the construction of a reservoir and well at Fort Crook.

BOWBELLS, N. DAK.—The City Council has awarded contract for constructing water-works to **GEORGE W. KEMPER** at $11,850.

BROOKINGS, S. DAK.—G. H. Stoddart, City Audr., will receive bids until 8 p. m., Nov. 7, for the construction of a 24-ft. and a 30-ft. well.

POWELL, WYO.—Bids will be received at the office of the United States Reclamation Service, Powell, until 2 p. m., Nov. 30, for the construction and completion of distributing canals, concrete and other structures in connection with the Shoshone project, Wyo. The work involves the excavation of about 21,000 cu. yds. of material, the construction of about 25 miles of "mileage ditch," the placing of about 1,700 cu. yds. of plain and reinforced concrete, the laying of about 4,500 lin. ft. of 12, 18 and 24-in. cement pipe, the hauling and placing of about 152,000 lbs. of structural steel, the hauling and placing of about 81,000 ft. B. M. lumber, and furnishing such material and doing such work as may be necessary for the construction and completion of ditches and structures ready for operation. H. M. Savage is Super. Engr., Helena, Mont.

LEWISTON, MONT.—O. F. Wasmansdorf, City Engr., is preparing plans for improvements to the water-works system.

EASTLAND, TEX.—The city is considering the construction of water-works. Estimated cost, about $15,000. Charles Pellet is City Secy.

MARION, TEX.—The city will construct a water system, water to be pumped into standpipe to be located at elevated point on Guadalupe River, six miles distant. A pipe line will be laid.

WORTHAM, TEX.—The city will construct water-works to cost $8,000, for which bonds have been voted.

BALLINGER, TEX.—The city has voted $16,000 of bonds for improving the water-works. J. A. Kelly, Ballinger, is Engr.

DALLAS, TEX.—J. M. Bassett, Ch. Eng. Water Dept., has recommended to the City Council the drilling of five wells to average depth of 600 ft. Estimated cost, $14,000.

AUSTIN, TEX.—Bonds for $28,000 for the construction of water-works were approved on Oct. 20. George Tredell is City Engr.

GEORGETOWN, TEX.—See item under Light and Power Plants.

OKMULGEE, OKLA.—We are officially advised that T. Jeff Embree, Engr., Okmulgee, is preparing plans for water improvements to cost $60,000, and creek improvement to cost $25,000. Bonds will be voted upon on Nov. 3.

CHELAN, WASH.—Twelve thousand acres of sage brush lands in the Methow Valley in north central Washington will be reclaimed by an extension of the Bollinger irrigation ditch. The lands are included in the Pateros, Tupper, Antoine and Howard flats. H. W. Boetzkes, Chelan, is making the preliminary surveys. J. M. Ellingsworth, Lincoln, Neb., is interested.

SPOKANE, WASH.—Bids are asked until Nov. 11 by the Board of Public Works for the completion of the Lincoln Heights reservoir. George W. Armstrong is Comr.

ODESSA, ORE.—The Rogue River Valley Canal Co., Medford, Ore., successors to the Fish Lake Water Co., has filed with the Government land office, Lakeview, right of way maps for the seservoirs and canals in connection with the irrigation project at Fish and Four-Mile lakes. The lands involved are located near here. The company will enlarge the reservoirs located at Fish and Four-Mile lakes.

MODESTO, CAL.—The City Trustees have awarded contract to the **FREDERICK C. ROBERTS CO.**, 461 Market St., San Francisco, Cal., for furnishing and installing the pumps for three pumping stations at $7,751.

ORLAND, CAL.—The Secretary of the Interior, Washington, D. C., has awarded to **HARD BROS.**, Concord, Cal., the contract for the construction of Schedules 1, 2 and 3 of the earth work of the distribution system, Orland irrigation project, at $10,738. This contract calls for about $58,000 cu. yds. of excavation. Noted on Oct. 13.

SAN FRANCISCO, CAL.—The contract for water and sewer extensions here at Fort Winfield Scott, has been awarded, it is reported, to **K. EHRHART**, San Francisco, at $10,225.

DORRIS, CAL.—O. E. Moore has been engaged by the Town Trustees to prepare plans and specifications for the construction of a new water system.

SEWERS.

(* *Denotes that this work is advertised in Engineering News.*)

BEVERLY, MASS.—The construction of a sewage filtration plant, to cost about $150,000 is contemplated. Chas. H. Trowt, is Mayor.

ANSONIA, CONN.—Bids for the construction of Section D of the Ansonia sewer system will be received by H. V. Clark, City Engr., until Nov. 5.

BROOKLYN, N. Y.—Bids will be received by Alfred E. Steers, Pres. of the Borough of Brooklyn, Borough Hall, Brooklyn until 11 a. m., Nov. 9, for the construction of sewers in various streets.

RIDGEWOOD, N. J.—The villege trustees have awarded the contract to **FRANK PUGLIA**, 34 Cross St., Paterson, N. J., for the construction of about 3,300 ft. of 8-in. pipe sewer. J. B. Hopper, is Vil. Clk. and H. J. Harder, Vil. Engr., Paterson, N. J.

RED BANK, N. J.—The contract has been awarded to **WILLIAM J. SMITH for extending the sewer system at Spring Lake, along Atlantic Ave., between Third and Fourth Aves.**

CARBONDALE, PA.—The construction of sewers is contemplated by the Street Committee, and will include the installation of sewers in all city streets, the cost is estimated at $55,000.

SCRANTON, PA.—The Select and Common Council has awarded the contract to **HUGH ATKINSON** for the construction of a surface sewer in 42d St.

GREENSBURG, PA.—The construction of a sewerage disposal plant has been ordered to commence at once by the State Dept. of Health, owing to the contamination of the Latrobe water supply.

WEST VIEW, PA.—Bids for the construction of main sewers and disposal plant were returned unopened. H. L. Donaldson, is Boro. Secy.; Trimble & Miller, engrs., Fourth Ave., Pittsburg.

MARCUS HOOK, PA.—The council has decided to construct a sewer in East 9th and Church Sts.—H. R. Aaron is Clk.

PITTSBURG, PA.—Bids will be received by Minott M. Baker Acting Engr., Municipal Bldg., Pa., until 4 p. m., Nov. 4, for the construction of a sewer in Hopkins St. N. S. Sprague is City Engr.

WEST CHESTER, PA.—Albert F. Damon has been engaged by the Board of Borough Council to prepare plans and specifications for the proposed sanitary sewer system and plant.

FORT WASHINGTON, MD.—Bids will be received at the office of Capt. R. H. Kelton, quartermaster, Fort Washington, Md., for the construction of a new sewer outfall at Fort Washington, Md., until 1.30 p. m., Nov. 7. Captain R. H. C. Kelton, is constructing quartermaster.

RICHMOND, VA.—The City Council has apportioned the following amounts for sewers: $33,560 for constructing sewers in Lombardy, East Grace, 20th, Broad Sts. and between 20th and 21st, and in West Leigh Sts.; $38,488 for a sewer in Davis Ave., and in Sycamore, Chaffin, Dance Chaffin and Taylor Sts.; $39,686.

HUNTINGTON, W. VA.—The City Commissioners will shortly advertise for bids on the laying of an extensive system of sanitary sewers in the First Ward of this city. J. H. Sanborn is City Engr.

ROCKYMOUNT, N. C.—It is reported that the City Council has under consideration the construction of sewerage disposal plant.

OCALA, FLA.—It is reported that the City officials and Board of Health have under consideration the construction of a sewerage system.

BARTOW, FLA.—The city will construct about half mile of storm sewer to drain hollow at intersection of Main St. and Hendry Ave.

MOBILE, ALA.—Plans have been submitted by Wright Smith, Engr., to Board of Public Works for the extension of sewer system. The cost is estimated at $204,700.

BARBERTON, OHIO.—The council will ask for bids for the construction of a sanitary sewer on Tuscarowas Ave. and for draining and grading Rose St.

NILES, OHIO.—An ordinance has been passed by the City Council for the construction of a sewer in Hartzell Ave., F. M. Brown is City Engr.

DELAWARE, OHIO.—The city council has passed an ordinance for the construction of a sanitary sewer in Liberty St., from Lincoln to Fountain Sts., and from Liberty to Washington St. The City Engr. has also been ordered to prepare plans for a storm water sewer in Heffner St.

CARTHAGE (Cincinnati post-office), O.—Bids will be received by Lewis Hall, Vil. Clk., until noon, Nov. 8, for the construction of a sanitary sewer system. Plans, etc., at office of Clinton Cowen, Vil. Engr.

MANSFIELD, OHIO.—The Board of Control has awarded the contract to **LYMAN OSTRANDER** for the construction of a storm sewer in Bowman St., from 4th St. to Park Ave. West. A. Kallmerten, Secy.

STEUBENVILLE, OHIO.—A resolution has been adopted by the City Council for the improvement of Alley between South 4th and South 5th Sts., for the constructing of a storm and sanitary sewer. John J. Dillon, Pres. of the Council.

WILMINGTON, OHIO.—The construction of a drainage and sewer system is under consideration. The cost is estimated at $90,000. E. C. Bradbury, Columbus, O., is interested.

AKRON, OHIO.—Service Director Gauthier has completed arrangements for the construction sewer plant.

BOWLING GREEN, OHIO.—The City Council adopted a resolution declaring it necessary to construct a latteral sanitary sewer in Wallace Ave. R. S. Sweet is City Clk.

SOUTH BEND, IND.—Bids will be received by the department of Public Works until 10 a. m., Nov. 8, for the construction of a sewer in St. Peter St., from Madison St. to LaSalle Ave. Plans at the office of Otto Bastian, Pres., Dept. Public Wks.

SEYMOUR, IND.—Bids will be received by Board of Public Works, for the laying of 400 lin. ft. of 12-in. vitrified pipe sewer. E. B. Douglas, City Engr.

BICKNELL, IND.—W. J. Nicholson and Jacob S. Spiker have received a franchise and will soon ask for bids for the construction and equipment of a sewerage system in various streets.

DETROIT, MICH.—The Common Council of Detroit has awarded the contract for the Fairview public sewer in Jefferson Ave., E., length 3,466 ft., to **LANGELY & JAYNES**, Detroit, Mich., at $55,587.

NEGAUNEL, MICH.—The contract has been awarded to **PETER BARASA & CO.** for putting in 1,500 ft. of pipe sewer for the Cleveland Cliffs Iron Co. in Davis St.

CARO, MICH.—Bids received by Board of Trustees for the construction of 11,000 ft. of sanitary sewer were as follows: J. T. Lynch, Union Trust Bldg., Flint, Mich., $10,731; G. C. Penney, 1340 Nicholas Bldg., Toledo, O., $9,076; E. M. Scheflow, 35 West 7th Ave., Cary, Ind., $10,081; Vanderweele Bros., 51 Baldwin St., Grand Rapids, Mich., $9,253; Jno. W. Collins, 533 Wright St., Flint, Mich., $7,392; Louis Jagnau, 106 Johnson St., Jackson, Mich., $8,895. W. N. Sager, 308 Weber St., Saginaw, Mich., $9,046; Peter Peterson & Nick Meaher, 409 N. Linn St., Bay City, Mich., $10,827.

CHICAGO, ILL.—The contract has been awarded to **I. C. MISCHLER**, for the storm sewer, which will be constructed on McCallie Ave., between Highland Park Ave. and Hawthorne St.

BARRINGTON, ILL.—The Board of Local Improvements, has under consideration the construction of a sanitary sewer system.

GLENELLYN, ILL.—The contract has been awarded to the **AETNA ENGINEERING CO.**, 125 LaSalle St., Chicago, for the construction of a sewer for Glenellyn. The cost is estimated at $200,000.

CHARLESTON, ILL.—The construction of a sewer in 11th and Harrison Sts., has been decided necessary by the Board of Local Improvements. Work will commence as soon as the contract is awarded.

HIGHLAND PARK, ILL.—The contract has been awarded by Board of Local Improvement to the **SCHMIDT CONSTRUCTION CO.**, for the construction of a sewer in Sheridan road, a distance of 1,385 ft. Wm. M. Dooley, Pres. of Bd. of Improvement.

EAST MOLINE, ILL.—An ordinance has been passed for the construction of a sewer system. Plans and specifications have been prepared by City Engr., Paddock. The cost is estimated at $55,000.

NORTH MILWAUKEE, WIS.—The contract has been awarded to the **IDEAL PLUMBING & HEATING CO.** for laying approximately 2,000 ft. of lateral sanitary sewers in various streets. W. E. Chase, Vil. Clk.

STOUGHTON, WIS.—Plans have been approved by the Common Council for the proposed city sewerage system.

MILWAUKEE, WIS.—H. E. Briggs, Comr. of Public Works, will receive bids until Nov. 5 for constructing pipe sewers in the following streets of the western sewerage district: 22d St., from Hopkins St. to Concordia Ave.; 44th St., from Meinecke to North Ave.; 23d St., from Auer Ave. to a point 350 feet north of Auer Ave.; Pabst Ave., from 48th to 52d St.

OCONOMOWOC, WIS.—**F. KAMINISKI**, Watertown, Wis., has been awarded the contract for the construction of a storm water sewer system throughout the city.

CLINTON, IOWA.—Bids received at West Liberty, Iowa, Oct. 25, for six miles of sanitary Sewer and a Disposal Plant, as follows: C. R. Nicholas, Caney, Kans., $21,874; C. R. McKay, Omaha, Neb., $22,682; Ottawa Construction Co., Ottawa, Ill., $22,861; Guy E. Smith, Indianola, Iowa, $23,264; J. W. Turner Improvement Co., Des Moines, Iowa, $23,370; Independent Construction Co., Davenport, Iowa, $24,886; Dearborn & Jackson, Cedar Rapids, Iowa, $25,362; M. Conroy & Co., Des Moines, Iowa, $25,718; R. C. De la Hunt, Cedar Rapids, Iowa, $25,933; E. L. Dimick, Laurel, Neb., $26,247; W. D. Yeager, Cedar Rapids, Iowa, $26,978; Thos. Carey & Son, Clinton, Iowa; $28,737; Lytle Construction Co., Sioux City, Iowa, $28,952; Pastorest & Lawrence, Duluth, Minn., $29,885; O'Farrell Contracting Co., Dubuque, Iowa, $30,109. The two lowest bidders on the Disposal Plant were as follows: C. R. Nicholas, Caney, Kans., $6,781; Independent Construction Co., Davenport, Iowa, $7,129.

GILBERT, MINN.—Plans have been prepared by Frank A. Bowman, City Engr., for the construction of a system of sewers. Estimated cost, $20,000.

ST. PAUL, MINN.—The Common Council passed a resolution for the construction of sewers in four streets. Peter Van Hoven, is Pres.

VIRGINIA, MINN.—The construction of sanitary sewers in various parts of the city is contemplated by the Council. Alderman Boylan is interested.

CANTON, S. DAK.—The City Board of Commissioners has awarded the contract to **A. L. HAUSITON**, Lennox, S. Dak., and **MYRMO BROS.**, Sioux Falls, S. Dak., for the construction of various sewers. Carl F. Tank, is Mayor.

MITCHELL, S. DAK.—Bids will be received by L. L. Ness, City Audr., until 8 p. m., Nov. 7, for the necessary labor and material for the construction of sewers.

CAMERON, MO.—Plans have been completed by Engineers Seitz & Peterman, Corby Bldg., St. Joseph, Mo., for 8 and 10-in. vitrified pipe lateral sewers for Cameron. W. G. Stoner, is Mayor.

KANSAS CITY, MO.—Plans have been completed by the Kansas City Terminal Ry. Co., for the construction of three concrete and brick sewers in Independence Rd. J. V. Hanna Chief Engr., 23d St. and Grand Ave.

LITTLE ROCK, ARK.—The contract has been awarded to **J. McCOPPIN**, Little Reck, Ark., for constructing sewers in District No. 1, Morrilton, Ark.

FORT CROCKETT, TEX.—The contract for the construction of a sewerage system, has been awarded **KELSO & VAUTRIN** at $16,950.

HOQUIAM, WASH.—The contract for the construction of a sewer in the Park addition was awarded by the Council to **JOHN IHLO**.

COLUSA, CAL.—The trustees have awarded the contract to **BRANN, WILLIAMS & RUSSELL**, today, 6,400 ft. of pipe connecting the water mains for the construction with the flush tanks of the sewer system.

OAKLAND, CAL.—Bids will be received by the Board of Public Works, until 10 a. m., Nov. 9, by the Board of Public Works, for furnishing the necessary labor and materials, and for the construction of a storm sewer, in Market and 7th Sts., Jas. W. Nelson is Secy.

VALLEJO, CAL.—Plans and profiles for the proposed sewers in Solano Ave., Farragut Ave. and Tennessee Ry. were approved by the City Trustees with the recommendation that they be adopted.

The City Council awarded the contract for the construction of a sewer in District 108, to J. P. O'NEILL CONSTRUCTION Co.

WOODLAND, CAL.—Bids will be received by the Clerk of the Board of Trustees until 7 p. m., Nov. 7, for furnishing 1,600 ft. of 6-in. first quality, vitrified sewer pipe. E. B. Mering, is City Clk.

ALAMEDA, CAL.—The City Council passed a resolution ordering that a sewer be constructed in Grand St. in a right line from the existing manhole at the crossing of Grand St. and Clinton Ave. along the center line of Grand St. to the existing manhole at the crossing of Grand St. and Dayton Ave. F. E. Browning is Clk.

VICTORIA, B. C.—Extensive additions to the city's sewerage system are contemplated. The extensions are estimated by the engineers to cost in the neighborhood of $235,000. W. N. Dorrier is City Engr.

GARBAGE DISPOSAL.

(Denotes that this work is advertised in Engineering News.)*

BOSTON, MASS.—Bids are asked by Louis K. Rourke, Supt. of Streets, until Nov. 10, for the removal of snow and ice in six snow districts, the contractor to furnish teams, horses and men, and to bid on price per cu. yd. dumped at place specified. Contract to cover from Nov. 15, 1910, to Jan. 31, 1911, with privilege to extend to May 1, 1911.

COLUMBUS, OHIO.—Bids will probably be received this month for the proposed supplementary garbage plant. Estimated cost, $17,000. Noted on Oct. 20.

ST. PAUL, MINN.—W. C. Handy and D. H. Michaud, Assemblymen, and George J. Ries and W. J. Troy, Aldermen, have been appointed as a commission to prepare plans for a municipal incinerating plant. Estimated cost, about $75,000.

SEATTLE, WASH.—R. H. Thomson, City Engr., under the supervision of I. W. Embury, is having plans prepared for the construction of an incinerator to be located in the southerly portion of the city. This incinerator is to be of the same general type as is now in use by the city of Seattle, known as the "Meldrum." One-half a unit is to be constructed at the present time. At the last general election it was voted to issue $400,000 of bonds for the purpose of building incinerators and establishing a general system of garbage collection. There has also been included in next year's tax levy, the sum of $370,000 for the purpose of establishing a system to collect and dispose of garbage within the corporate limits of the city. This collection is to be done under the supervision of the Health and Sanitation Department, being handled partly by wagons and teams and partly by auto wagons.

CYPRESS, CAL.—The City Engineer has been ordered to prepare plans for a crematory for the disposal of garbage and rubbish.

TORONTO, ONT.—The Board of Control has authorized the Council ot engage Rudolph Hering, 170 Broadway, New York, to prepare a report on the best methods to adopt for garbage incineration.

STREETS AND ROADS.

(Denotes that this work is advertised in Engineering News.)*

PORTSMOUTH, N. H.—Bids were received on Oct. 27, by H. C. Hill, State Engr., Concord, for paving in Portsmouth, with trap rock. The contract has been awarded to FRED E. ELLIS, of Melrose, Mass., we are officially advised. Estimated cost, $4,000.

BOSTON, MASS.—A state highway is proposed over Hoosac Mountain, grades not to exceed 6% through the towns of Zoar, Florida and Charlemont. The cost is to be about $500,000. Harry L. Whitney, is City Engr.

BRIDGEPORT, CONN.—The contract for paving State St., between Main and Broad Sts., with wood blocks, has been awarded to CHARLES F. A. BILTZ, at $1.20 a sq. yd. The other bids were: Nicholas Biafore, $1.27 a sq. yd.; The Burns Co., $1.58 a sq. yd.; Joseph F. Doherty & Bro., $1.53 a sq. yd.

WETHERSFIELD, CONN.—The contract for the construction of about 4,500 lin. ft. of macadam road, bids for which were received on Oct. 28, have been awarded by the Board of Selectmen to the LANE CONSTRUCTION CORPORATION, Meriden, Conn., at $1.14 a lin. ft., for a 12-ft. roadway and $1.49 a lin. ft. for a 16-ft. roadway. Other bidders were: A. Brazos & Sons, Middletown, Conn., $1.28 and $1.65; Sternberg & Cadwell, West Hartford, Conn., $1.30 and $1.60; Thomas Kearney, Meriden, Conn., $1.47 and $1.67.

HARTFORD, CONN.—Bids for the construction of State road work will be received at the office of the State Highway Commission, Capitol, until 2 p. m., Nov. 14, as follows:

Boro. of Naugatuck, 3,300 lin. ft. macadam and 6,598 lin. ft. gravel road on Chestnut St., including one 18-in., one 24-in., one 12-in., and one 20-in. tile culverts. Plans and specifications at Boro Clerk's office, Naugatuck.

Town of Norfolk, two sections grading on the Torrington road, aggregating 11,900 lin. ft., including seven 24-in., three 15-in., one 20-in., and two 12-in. tile culverts, and one reinforced concrete culvert. Also 10,100 lin. ft. of grading on the Winsted road, including one 12-in., one 18-in., four 15-in., three 24-in., and three 20-in. tile culverts, and three concrete culverts. Plans and specifications at Selectmen's office, Norfolk.

Town of Huntington, about 2,000 lin. ft. grading on the river road, including one 24-in. tile culvert and two reinforced concrete culverts. Plans and specifications are at the office of B. N. Beard, First Selectman, Shelton.

Town of Canaan, 7,277 lin. ft. grading on the Falls Village Road, including five 15-in. and one 12-in. tile culverts. Also 7,576 lin. ft. grading on the Point of Rocks Road. Plans and specifications are at Selectmen's Office, Falls Village.

Town of New Fairfield, four sections grading, aggregating 4,165 lin. ft., including six 12-in. tile culverts. Plans and specifications are with Norris Hatch, First Selectman.

Town of Southbury, 5,055 lin. ft. gravel on the Southford road, including three 15-in. and one 24-in. tile culverts; also 5,970 lin. ft. gravel on the Newtown road, including one 18-in., seven 15-in. tile culverts and one reinforced concrete arch culvert; also 4,500 lin. ft. gravel road on the Newtown Turnpike, including six 24-in. tile culverts. Plans and specifications are with I. L. Hawkins, South Britain.

Town of Plainfield, 11,230 lin. ft. gravel road, including one 18-in., two 12-in., one 24-in., and two 15-in. tile culverts. Plans and specifications are with the Selectmen, J. C. Gallup, Chn., Moosupe.

Town of Ridgefield, 11,997 lin. ft. gravel on the Norwalk and Danbury Turnpike, including three 15-in. and two 12-in. tile culverts; also one section 3,837 lin. ft. gravel. Plans and specifications are at Selectmen's Office, Ridgefield.

Town of Redding, 3,241 lin. ft. gravel on the Danbury and Norwalk Turnpike. Plans and specifications are at the Selectmen's Office, Ridgefield.

Town of Danbury, 5,500 lin. ft. gravel on the Danbury and Norwalk Turnpike, including four 15-in., and one 12-in. tile culverts. Plans and specifications are at the Selectmen's Office, Danbury.

NEW YORK, N. Y.—Bids will be received by Alfred E. Steers, Pres., Boro. of Brooklyn, until 11 a. m., Nov. 17, for curbing and laying sidewalks on East 26th St., from Newkirk Ave. to Foster Ave., together with all work incidental thereto. Also for regulating and paving with asphalt on a concrete foundation the roadways of various streets.

Bids are asked until 3 p. m., Nov. 17, by the Dept. of Parks, Boro. of Queens, for constructing bluestone curb and brick gutters on concrete foundation on Forest Parkway, between Jamaica Ave. and Forest Park, in the Boro. of Queens. Charles B. Stover is Pres.

Bids will be received until 11 a. m., Nov. 9, by Alfred E. Steers, Pres., Boro. of Brooklyn, for regulating, grading, curbing and laying sidewalks on various streets and avenues in the Boro. of Brooklyn.

The following bids were received on Oct. 26, by Alfred E .Steers, Pres., Boro. of Brooklyn, for regulating and repaving with asphalt pavement on a concrete foundation the roadway of Carroll St., from Henry St. to Clinton St., Second St., from Bond St. to Gowanus Canal, and from Clinton St. to Smith St.: Uvalde Asphalt Paving Co., 1 Broadway, $13,255; Brooklyn Alcatraz Asphalt Co., 407 Hamilton Ave., Brooklyn, $12,274; Barber Asphalt Paving Co., 30 Church St., $13,043; Cranford Co., 52 Ninth St., Brooklyn, $12,156.

NEW YORK, N. Y.—The following bids were also received at the same time and place for regulating and repaving with asphalt pavement on a concrete foundation the roadway of East New York Ave., from Rockaway Ave. to Sackman St., and Sackman St. from East New York Ave. to Liberty Ave.: Uvalde Asphalt Paving Co., $13,706; Barber Asphalt Paving Co., $14,251; Cranford Co., $14,238; Borough Asphalt Co., 1301 Metropolitan Ave., Brooklyn, informal.

The following bids were received by Cyrus C. Miller, Pres., Boro. of Bronx, on Oct. 27, for regulating, grading, setting curbstone, flagging the sidewalks, laying crosswalks, building approach, placing fences and repaving with granite blocks on a concrete foundation the roadway of 149th St., from Mott Ave. to Morris Ave.

Also for paving with asphalt blocks on a concrete foundation the roadway of Park Ave., west from East 177th St., to East 189th St. and setting curb where necessary.

For regulating and repaving with sheet asphalt pavement on a concrete foundation the roadways of:

Jerome Ave., from the New York Central & Hudson River R. R., to East 162d St., and Arthur Ave., from East 183d St., to Pelham Ave. and setting curb where necessary:

L. J. Moran, $17,321; M. Dimenna, $16,968; J. J. Shea Contracting Co., $17,281; J. E. Malatesta, $17,756; Atlanta Contracting Co., $18,706; M. Baird Contracting Co., $17,642.

Barber Asphalt Paving Co., $43,395; Hastings Pavement Co., 25 Broad St., $44,431.

Barber Asphalt Paving Co., $18,244; Uvalde Asphalt Paving Co., $18,948; Asphalt Construction Co., Madison Ave. and 137th St., $19,694.

Barber Asphalt Paving Co., $20,054; Uvalde Asphalt Paving Co., $19,918; Asphalt Construction Co., $21,147.

YONKERS, N. Y.—James V. Mahony, Secy., Bd. of Contract and Supply, will receive bids until 3.30 p. m., Nov. 7, for regulating, grading and improving portions of High St., also for constructing bridge over Nepperhan River at Axminster St., also for decorating interior of new city hall. Plans and specifications are filed with John T. Geary, City Clk., Manor Hall.

*ASBURY PARK, N. J.—We are officially advised that the contract for laying 8,450 sq. yds. of creosoted wood paving blocks on Cookman Ave., from Grand Ave. to Kingsley St., has been awarded to the U. S. WOOD PRESERVING CO., 165 Broadway, New York, at $2.52½ a sq. yd. The bids were received on Oct. 31, by William C. Burroughs, City Clk.

NEWARK, N. J.—Bids will be received by the Committee on Roads and Assessments of the Board of Chosen Freeholders, Essex County, Newark, until 10 a. m., Nov. 10, for grading and paving with telford pavement: Gregory Ave., in the town of West Orange, from Mt. Pleasant Ave. to Luddington Ave., a distance of 8,846 ft.; from Jerolamon St. in the township of Belleville, to the Avondale road in the town of Nutley, a distance of 6,133 ft.; also for coating with macadam: Green Brook Rd., in the township of Caldwell, from Pier lane to the North Caldwell line, a distance of 1,333 ft. Wallace Ougheltree is Dir.

*ALTOONA, PA.—Bids will be received until 3 p. m., Nov. 11, by the Board of Public Works, for grading and paving with vitrified brick on a concrete foundation various streets, maps of which are on file at the office of Engineering News, New York, together with specifications and estimated quantities. W. M. C. Craine is Pres. of Bd.

HARRISBURG, PA.—The State Highway Department has awarded contracts as follows: Perry County, Richland Township, 14,742 ft. brick, to FREDERICK ROBINSON, Waynesboro, $49,265; Indiana County, Indiana Boro., 8,380 ft., brick, M. BENNETT & SONS, Indiana, $20,517; National Rd., Fayette County, Brownsville Boro., 1,076 ft. brick, W. C. McCORMICK, Uniontown, $5,975.

*CHESTER, PA.—The following bids were received on Oct. 17, by Samuel McClure, Chn. of Street Com., and contracts awarded, for paving Highland Ave., from Third to Sixth St.

United Paving Co., Bitulithic, $2.28 per sq. yd; McAvoy block, $2.42; Mack block, $2.50½; grading 60 cts. per cu. yd; crossing stones, 50 cts per lin. ft.; curb, 82 cts; reset curb, 16 cts; reset crossing, 20 cts; relay vitrified brick, 25 cts.; relay granite block, 37 cts.; relay asphalt, $2.15; relay rubble, 14 cts.; macadam, $2.04 per ton.

Dickerson Paving & Construction Co., Metropolitan block, $2.35 per sq. yd.; Montello block, $1.95; Mack block, $2.27; Saxon block, $2.12; Clearfield block, $2; amiesite, $1.60; grafton block, $2.27; bithulithic, $2.55; grading, 30 cts; crossing stones, 80 cts.; curb, 75 cts.; reset curb, 12 cts.; reset crossing, 10 cts.; relay vitrified block, sand and base, 60 cts.; concrete base, 60 cts.; relay asphalt, $2.; relay rubble, 25 cts.; macadam, $2.10 per ton.

Standard Bitulithic Co., bitulithic, $2.24 per sq. yd.; grading, 60 cts.; crossing stones, 50 cts.; curb, 80 cts.; reset curb, 15 cts.; reset crossing, 15 cts.; relay vitrified block, 15 cts.; relay granite block, 24 cts; relay asphalt, $2.; relay rubble, 25 cts.; macadam, $1.90 per ton.

Barber Asphalt Co., Asphalt, $1.84 per sq. yd; grading, 45 cts.; crossing stone, 70 cts.; Mack block for gutters and tracks, $2.39 per cu. yd.; curb, 70 cts.; reset curb, 8 cts.; reset crossing, 10 cts.; relay vitrified block, 75 cts.; relay granite block, 50 cts.; relay asphalt, $1.50; relay rubble, 50 cts.; macadam, $1.75 per ft.

Filbert Paving & Construction Co., Filbertine, $1.67 per sq. yd.; grading, 45 cts.; crossing stones, 96 cts.; curb, 90 cts; reset curb, 12 cts.; reset crossing, 15 cts.; relay vitrified block, 49 cts.; relay granite block, 50 cts.; relay asphalt, $1.95; relay rubble, 20 cts.; macadam, $1.05 per ton.

Atlantic Bitulithic Co., bitulithic, $2.35 per sq. yd.; grading, 45 cts.; crossing stones, 45 cts.; curb, 88 cts.; reset curb, 18 cts.; reset crossing., 16 cts.; relay vitrified block, 30 cts.; relay granite block, 50 cts.; relay asphalt, $1.95, relay rubble, 10 cts.; macadam $2.15 per ton.

Edwin H. Vare, Betz Bldg., Philadelphia, 3-in. wood block, $2.74 per sq. yd.; 3½-in. wood block, $2.94; 4-in., $3.64; grading, 75 cts.; crossing stones, $1; curb, $1; reset curb, 15 cts.; reset crossing, 2 cts.; relay vitrified block, 25 cts.; relay granite block, 25 cts.; relay asphalt, $3; relay rubble, 15 cts.; macadam, 30 cts. per ton; alternate bid offered for 3-in. wood block on 5-in. concrete base, $2.62.

Third St., from Thurlow St. to Concord Ave., 37,200 sq. yds. United Paving Co., Bitulithic, $2.27 per sq. yd. Other prices same as previously quoted.

Dickerson, all prices same as previously quoted.

Standard, all prices same as previously quoted.

Filbert, all prices same as previously quoted.

Atlantic, all prices same as previously quoted.

Barber Asphalt, $1.94; grading, 46 cts.; other prices same as above.

Edwin H. Vare, crossing stones, 80 cts.; other prices same as before.

Madison St., from Sixth to Twelfth, prices same as previously quoted except as follows: United bitulithic, $2.29 per sq. yd; Standard, bitulithic, $2.23; Barber Asphalt, $1.84; grading, 45 cts.; Atlantic Bitulithic, $2.35.

Providence Ave., from 16th to 24th Sts., 11,780 sq. yds., prices same as previously quoted except as follows: United Bitulithic, $2; Standard Macadam, $1.90 per ton; Barber Asphalt, $1.49; grading, 46 cts.; Atlantic Bitulithic, $2.28; E. H. Vare, grading, 74 cts.

Morton Ave, Railroad to Mundy's Run, 7,100 sq. yds., prices same as previously quoted except as follows: Barber Asphalt, $1.94; grading, 45 cts.; relaying vitrified block, 75 cts.; Atlantic Bitulithic, $2.35.

The FILBERT PAVING AND CONSTRUCTION CO., Pennsylvania Bldg., Philadelphia, was awarded the contract for paving the following streets with Filbertine: Highland Ave., from Third to Sixth, 3,546 sq yds., at $5,921; Madison from Sixth to Twelfth, 8,100 sq. yds., at $13,527; Providence Ave., from 16th to 24th, 1,780 sq. yds., $19,673; Morton Ave., from Railroad to Mundy Run, 7,100 sq. yds., at $11,857; Fifth from Morton to Edgemont, 8,250 sq. yds., at $13,777; Hildland Ave., from Front to Third, Sixth to 12th 10,700 sq. yds. at $17,869; Ninth, from Morton to Riddly River, 8,800 sq. yds., at $14,696; Pennell, from Front to Fifth, 4,820 sq. yds., at $8,049; Third to Hinson, 10,200 sq yds., at $17,034; Tilghman, from Second to Railroad, 3,910 sq. yds., at $6,530; Fulton, from Front to Fifth, 5,040 sq. yds., at $8,417; Fulton, from Sixth to Ninth, 3,310 sq. yds., at $5,528; Parker, from Front to Third, 2,540 sq. yds., at $4,242; Hyatt, from Ninth to Morton, 2,665 sq. yds., at $4,451.

Seventh, from Butler to Central Ave., 11,600 sq. yds., at $19,372; Crosby, from Third to Fifth, 1,365 sq. yds., at $2,797; Crosby, from Sixth to Eighth, 1,580 sq. yds., at $2,639; Upland, from Third to Fifth, 1,652 sq. yds., at $2,750; Broomall, from Front to Third, 3,000 sq. yds., at $5,010; Madison, from Third to Fourth, 758 sq. yds., at $1,266; Hinkson, from Third to Eighth, 2,104 sq. yds., at $3,135; Caldwell, from Sixth to Canal, 2,863 sq. yds., at $4,2[illegible] McIlvane, from Sixth to Ninth, 3,870 sq. yds., at $5,706; 16th, from Providence to Chestnut St., 2,160 sq. yds., at $3,218; Sixth from Highland to Wilson, 2,780 sq. yds., at $4,142.

These awards were made to THE DICKERSON PAVING & CONSTRUCTION CO.: Fifth between Pennell and Lloyd., at [illegible] a yard for a total of $2,400; Parker St., from Sixth to Ninth, with Grafton block, at $2.27 a sq. yd., total, $7,372.

The contract for the paving of West Third St., with wood block was awarded to EDWIN H. VARE. The contract involves the paving of 37,000 sq. yds., at a total cost of $101,928.

NORTH BRADDOCK (Braddock post-office), PA.—Separate bids will be received by C. A. Stewart, Boro. Engr., Municipal Bldg., Jones Ave., North Braddock, until 3 p. m., Nov. 4, for the improvement of Wilkins Ave., and for the improvement of Willow St. Plans, specifications and bidding blanks are on file at Mr. Stewart's office.

PITTSBURG, PA.—We are officially advised that bids were received on Oct. 27, by R. J. Cunningham, Comptroller of Allegheny County, for the improvement of Ardmore and Guy's Run Roads. The contracts were awarded to BOOTH & FLINN, LTD., Forbes and Jumonville Sts., Pittsburg, at $47,843, for Ardmore Road and to the McLAUGHLIN CONTRACTING CO., Fourth Ave., Pittsburg, at $22,348, for Guy's Run Road.

CUMBERLAND, MD.—The contract for completing a section of a road near the Baltimore Pike, Six Mile House, started by Hootman Bros., has been awarded to J. E. FRANCIS, of Oakland.

BALTIMORE, MD.—WEBB & WHITE, 508 Maryland Telephone Bldg., have been awarded the contract to pave streets and avenues, extend concrete sidewalks, lay new gutters, and also improvements to streets at Ailsa Terrace.

PARKERSBURG, W. VA.—The Board of Affairs, on Oct. 27, awarded the contract for the repaving of Market St. to C. KENNEDY, at $6,598, Athens block is to be used. Other bidders were: Otto Lehman, Athens block, $6,873; C. Skidmore, Athens block, $6,670; L. Heydenreich, $6,691.

BIRMINGHAM, ALA.—City ordinances have been passed for the following street improvements: Paving sidewalks on the south side of Avenue B, from 39th to 44th Sts., and on both sides of Avenue C, from 39th to 44th Sts., with artificial stone, at an estimated cost of $3,600; roadway on Avenue I, from 19th to 23d Sts., with bitulithic paving on concrete foundation, at an estimated cost of $15,500; grading 37th Ave., from 26th to 27th St. and 26th St. from 36th Ave. to 37th Ave., curbing with cement, combined curb and gutterfi paving with bituminous binder macadam roadway, 40 ft. wide, along center of 26th St. and 30 ft. wide along center of 37th Ave., and paving sidewalks for width of 4 ft., with artificial stone, at a cost of $7,100. C. Exum is Mayor and H. E. Shrapshire is City Clk. Maury Nicholson is City Engr.

BIRMINGHAM, ALA.—It is stated that the Board of Revenue has approved the plan of constructing the proposed Central Ave. macadamized road in Shades Valley. Maury Nicholson is City Engr.

VICKSBURG, MISS.—Bids will be received by J. D. Laughlin, County Clk., Warren County, until noon, Nov. 7, for widening and grading Pender Hill.

JACKSON BARRACKS (New Orleans post-office), LA.—Bids will be received by George B. Davis, Quartermaster, Hibernia Bank Bldg., New Orleans, until 11 a. m., Nov. 18, for the construction of roads and walks at Jackson Barracks.

CANTON, OHIO.—Plans to eliminate dangerous crossings on the Akron Line of the Northern Ohio Traction Co., have been prepared by P. H. Weber, City Engr. The curves are located at McKinley Ave. and Erie St., McKinley Ave. and Lake St., and Lake and Oxford Sts. The street is to be widened three feet, at these points.

CINCINNATI, OHIO.—Bids will be received by the Board of County Comrs., until noon, Nov. 18, for the improvement of change in River Road through lands of William Knollmon and Fred Kinsler in Crosby Township, under specifications No. 87. Fred Dreihs is Clk.

Bids will be received until noon, Nov. 4, by John J. Wenner, Clk., Dept. of Public Service, for furnishing the necessary labor and materials for the improvement of Pogue Ave., from Cohoon St., to its Western Terminus, by grading, setting limestone curbs, paving the roadway with brick and constructing the necessary drains and inlets.

CLYDE, OHIO.—We are officially advised that bids were received on Oct. 25, by H. M. Bacon, Clerk of the Corporation, for constructing a brick pavement on Amanda and Birdseye Sts., from the westerly end of the brick pavement on Amanda St., as now constructed to a point 36½ ft. north of the southerly line of the Western Reserve and Maumee Turnpike (State St.) and extending the entire length of Birdseye St., by grading, paving and curbing the same with stone curbing and vitrified paving brick and for constructing a sewer therein with all necessary manholes, catch basins, flushing tanks, house connection pieces, etc. The contract has been awarded to J. L. SMITH, of Lorain, at $13,060.

COLUMBUS, OHIO.—In a decision handed down by Judge Rogers the village of Linden Heights, near Columbus, is restrained from closing a contract with A. E. Best for laying stone sidewalks. The contract called for nine miles of stone sidewalks at $40,000. Judge Rogers' decision means that the village will have to readvertise for bids for the work.

GREENVILLE, OHIO.—The city council adopted resolutions declaring it necessary to improve West Third St., from Race St. to Chestnut St., and the south end of Race St. with macadam and storm sewers. L. N. Jackson is City Engr.

HAMILTON, OHIO.—The lowest bid received on Oct. 20, by the Board of Control, for paving South B St., East Ave. and North Sixth St., was that submitted by the Andrews Asphalt Paving Co., of Hamilton.

NORWALK, OHIO.—Bids will be received by Jay E. Smith, Audr. of Huron County, Norwalk, until 1.30 p. m., Nov. 7, for the furnishing of the tools and the performing the labor necessary to construct the improvement on the Ketcham Road, New London Township.

YOUNGSTOWN, OHIO.—The Board of Control has awarded the contract for paving West Rayen Ave., to the CLEVELAND TRINIDAD CO., at $17,272. List of bidders noted last week.

ANDERSON, IND.—The Commissioners of Madison County will receive bids until 10 a. m., Nov. 22, for the construction of a gravel road in Anderson and Lafayette Townships, known as the Charles L. Webb road, to be 10,672 ft. long. William T. Richards is County Audr.

LEBANON, IND.—The City Council will receive bids until 7.30 p. m., Nov. 14, for paving the roadway of North Lebanon St., with wooden blocks, asphalt or bituminous concrete. Edward Conner is City Clk.

VINCENNES, IND.—The Board of Public Works, has awarded the contract to EDWARD PENNINGTON, for the improvement of Broadway from 14th St., to the city ditch, by constructing concrete walk, at 8 cts. a sq. ft. and stone curb at 36 cts. a lin. ft.

CHICAGO, ILL.—The Board of Local Improvements has decided to repave Fifth Ave., from South Water St. to Van Buren St., with creosoted wooden blocks, in place of the present "turtle-backed" granite blocks. The pavement will be made with an 8-in. concrete foundation topped with the creosoted blocks 4-in. thick.

SUPERIOR, WIS.—The contract for improving John Ave., has been awarded to PETERSON & HAHN, at $6,544.

DAVENPORT, IOWA.—The City Council has been presented with and adopted a resolution providing for the paving of Brady St., from Second to Fifth Sts.

CROOKSTON, MINN.—We are officially advised that the bids received on Oct. 11, list of which was noted last week, for paving Houston Ave., South Ash St., East Fletcher St., East Robert St., East Second and East Third Sts., have been rejected. New bids will be received until Dec. 13, for paving with asphalt. J. E. Carroll is City Engr. and A. M. Childs is City Clk.

OMAHA, NEB.—The contract for repaving Broadway, from First to Sixth Sts., with Galesburg Block, has been awarded to E. A. WICKHAM, of Omaha, at $27,030.

The other two bidders were: M. H. Ford & Co., of Cedar Rapids, Iowa, at $28,730, and George D. Orr of Galesburg, Ill., at $29,240.

BELLINGHAM, WASH.—Plans and specifications for a highway, macadamized and 24 ft. in width, will be prepared under the supervision of Charles Lindbery, County Engr. The highway will run from the northern to the southern boundary of Whatcom County, and if all plans go through, it will be extended on by the State and other counties to the extreme southern line of the state. The road in this country will follow the present Guide Meridian road. A. W. Troutman is City Engr.

SEATTLE, WASH.—Bids for the following improvements will be received by the Board of Public Works, C. B. Bagley, Secy., until Nov. 4: Fourth Ave. and other streets, by alteration of existing pavement; estimated cost, $2,000; 30th Ave., South, and others, by grading ,at an estimated cost of $10,200; Third Ave., West, by grading, estimated cost, $5,600; alley in block 19, Capitol Hill Addition, by grading and paving, estimated cost, $3,050; Fourth Ave., by brick paving, etc., estimated cost, $87,500.

SEATTLE, WASH.—The following contracts were awarded by the Board of Public Works on Oct. 28: Tenth Ave. and others, by constructing concrete walks, to N. D. JOHNSON, at $8,973; his bid on concrete walks being 87 cts. per sq. yd. This price includes the entire walk complete, being the lowest bid ever received in this city on concrete walks. Other bidders on this improvement were: Carl Isedor & Co., $10,076, bidding 98 cts. on walks; De Flong & Co., $9,820, bidding 96 cts. on walks, and W. H. Smith, $10,961, bidding $1.07 on walks. Graham St., planking, awarded to RUFUS BUCK for $5,803. Other bidders on this improvement were: Christ Kuppler for $6,545; H. P. Mapes, $6,300; Hepler & Green, for $6,597; J. L. Stanley, for $6,650, and Anderson & Co., at $5,897. Lane St., concrete walks, to J. H. TOLMAN, for $6,604. W. H. Smith's bid was for $6,623. East John St., by paving, to the BARBER ASPHALT PAVING CO., for $2,724. E. E. Hall's bid was for $5,667. East Jefferson St., by paving, to P. J. McHUGH, for $28,247. Other bidders on this improvement were the Barber Asphalt Paving Co., for $31,515, and the Independent Asphalt Paving Co., for $29,142. Street St., cluster lights, Subdivision No. 1 (which includes the furnishing of all equipment), to AGUTTER-GRISWOLD CO., for $12,972. Other bidders on this subdivision were: John Galber, $16,481; Meacham & Babcock, $13,678; Stilwell Bros., $13,080; Powers Contracting Co., $13,528.

The following bids were received on Oct. 21, by the Board of Public Works, for the grading and filling of Alki Ave., Grant Smith & Co. and Stilwell was the lowest bid received at $157,399. However, his certified check was too low and this improvement will have to be re-advertised for bids, probably in about 30 days.

BAKERSFIELD, CAL.—The City Clerk has been instructed to advertise for bids for a 10 and 12-ton steam traction road roller.

HUNTINGTON BEACH, CAL.—We are officially advised that bids were received on Oct. 24, by C. O. Levering, City Clk., for paving, with petrolithic, Walnut and Olive Aves. The contract has been awarded to the B. R. DAVISON CONTRACTING CO., of Monrovia. J. C. Fountain is City Engr.

LOS ANGELES, CAL.—The Board of Public Works, has awarded the contract to GEORGE R. CURTIS, for improving Flower St., at $1.70 per lin. ft.; for grading and graveling, at 30 cts., per lin. ft.; for cement curbs, at 14 cts. per sq. ft.; for cement gutters, at 30 cts. per sq. ft.; for vitrified block gutters. Amount, $4,359.

The following bids have been submitted to the Board of Supervisors, for improving a portion of San Dimas Ave., on the Covina-Lordsburg Road; F. F. Prendergast, San Fernando Bldg., grading and constructing culverts on Section 1, $9,000; placing oiled ton; grading and culverts on Section 2, $4,000; placing paving macadam, 2,962 tons at $1.87 a ton Class A. Concrete, $15; Class C, $14.

Rife, Cave & Frenzell, grading and culverts on Section 2, $3,979; placing macadam, at $1.70 per ton; Class A concrete, $14; Class C, $12.

SACRAMENTO, CAL.—The Colonial Investment Co. recently awarded the contract for paving about seven miles of streets in Colonial Heights to the CLARK-HENERY CO.

SACRAMENTO, CAL.—See item under Manufacturing Plants.

SAN FRANCISCO, CAL.—The Mission Promotion Association has appointed a committee to investigate the plans already prepared for a city and county boulevard system, to include a 2-story tunnel. The Committee includes: Thomas G. Packham, J. B. Zimdars, Arthur G. Scholz, Patrick Broderick and Arthur Warren.

SAN PEDRO, CAL.—The work of surveying the route of the harbor boulevard from the west basin to the outer harbor was completed recently and bids will be asked soon for doing the work. The survey was made under the supervision of the Harbor Engineer, by a field party in charge of John Melville, Deputy City Engr.

LONG BEACH, CAL.—Only one bid was received on Oct. 26, by the Board of Public Works, for constructing a roadway, retaining walls, storm drain, sidewalk, landings, curbs, steps and all other work required, on Alamitos Ave., and was rejected.

OAKLAND, CAL.—Bids were received on Oct. 19, by James W. Nelson, Secy., Bd. of Pub. Wks., for paving the west side of Twelfth St. and the contract was let to COVAULT & CO., Albany Bldg., Oakland, at $8,438.

VISALIA, CAL.—The Board of Trustees, has awarded the contract for paving with asphalt concrete pavement on Acequia St., from the westerly line of Court St., to the easterly property line of Garden St., to the WORSWICK STREET PAVING CO.

MANUFACTURING PLANTS.

(* *Denotes that this work is advertised in Engineering News.*)

TOPSHAM, ME.—The Aberthaw Construction Co., 8 Beacon St., Boston, Mass., has been awarded the complete contract for the construction of the proposed mill which the Cabot Mfg. Co. is to erect on the Topsham side of the Cabot Co.'s dam, at Topsham, for the Pejepscot Paper Co. Russell W. Ealon is agt of the Cabot Co., at Brunswick.

BOSTON, MASS.—The Booth Mfg. Co. has awarded the contract for the erection of its proposed plant to the J. W. BISHOP CO., of Worcester, it is stated.

WORCESTER, MASS.—The Rome-Feigenson Co. has been incorporated for the purpose of erecting a plant here to manufacture heavy woolens. A. F. Feigenson, of Worcester, and Hyman J. Rome, of Gardner, are officers of the company.

PROVIDENCE, R. I.—The Revere Rubber Co., a subsidiary of the U. S. Rubber Co., has been granted permits to erect on Eagle St, Providence, a 4-story storehouse of brick and steel, 50x164 ft.; a 1-story brick and steel boiler and pumping house, 56x54 ft.; a 1-story manufacturing plant, brick and steel, 60x164 ft.; a 2-story storage and manufacturing building, 115x32 ft.; and a machine shop, part 1-story and part 2-story, 50x153 9-12 ft. CRUISE & SMILEY, of Providence, are the contractors. Noted on Sept. 22.

BUFFALO, N. Y.—The Augustine Automatic Rotary Engine Co. is having plans prepared by G. Morton Wolfe, Arch., Ellicott Sq. Bldg., for large additions to its plant at Elmwood Ave. and the Erie R. R. Two buildings, one a power house, 50x50 ft., two stories, and a factory wing, 35x100 ft., three stories are to be erected at once, and two factory buildings, 35x350 ft.; three stories, and 35x250 ft., three stories, respectively, will be erected in the near future. They are all to be of brick and reinforced concrete construction. Estimated cost, $100,000.

The Ansco Co., manufacturers of photographic apparatus and appliances, is planning to build a factory in Charles St., four stories high and 60x320 ft.

The Globe Elevator Co., Millard P. Ryley Pres., Chamber of Commerce Bldg., is having plans prepared for a grain elevator and mill to be erected on the Erie R. R., extending from Tennessee to Kentucky Sts., to replace the elevator at Niagara and Wayne Sts, recently burned.

The Iroquois Brewing Co., will add a stock house, 4-story and basement, and a bottling works, of brick and steel construction, to its brewing plant on Pratt St. Estimated cost, $150,000.

ELMIRA, N. Y.—At a recent meeting of the U. S. Cut Flower Co., it was decided upon to increase the size and capacity of the plant at Elmira Heights, adding a total of 25,000 sq. ft. of glass covered hot houses.

HUDSON, N. Y.—We are officially advised that JAMES STEWART & CO., 30 Church St., New York, have been awarded the contract to furnish all the equipment and construct the proposed 3,000 bbl. cement plant for the Knickerbocker Portland Cement Co., at Hudson.

NEW YORK, N. Y.—The Edgar Improvement Co., 178 Remsen St., Brooklyn, recently announced that four factories will be built for the manufacture of shoes. One will be at De Kalb Ave. and Steuben St., another at Atlantic and Schenectady Aves, also at De Kalb Ave. and Woolworth St., etc. Estimated cost, between $250,000 and $300,000.

PENN YAN, N. Y.—The Commercial Iron Works Co., which has been reorganized and incorporated with a capital of $30,000, will rebuild the plant on Lake St., which, with the exception of the molding room, was destroyed by fire several months ago. William M. Patterson, William N. Wise, and William T. Morris are the Directors.

ROCHESTER, N. Y.—The J. W. Storandt Mfg. Co., 322 St. Paul St., will erect a brick factory on Lyell Ave., for the manufacture of show cases.

ROCHESTER, N. Y.—Plans were filed recently by the Smith Sash, Door & Blind Co. for a $25,000 addition to their plant on Exchange St.

JERSEY CITY, N. J.—The Mutual Chemical Co., 92 William St., New York, will erect a factory building in the West Bergen section. The proposed buildings will be built on the westerly side of West Side Ave., opposite Audubon Ave., and will be of brick, two stories in height and 209x204 ft. All modern fireproof materials will be used. The cost will be about $60,000.

NEWARK, N. J.—D. W. R. Macdonald prepared the plans for the reinforced concrete building for light manufacturing purposes, which he will erect at 346 Elizabeth Ave., at an estimated cost of $60,000. It will be four stories high, and 206x50 ft.

JAMES CITY, PA.—The plant of the American Plate Glass Co., at James City, destroyed by fire recently, is to be rebuilt at once. The loss has been placed at $300,000, with insurance of $200,000. A. H. Guffney is Pres.

LANCASTER, Pa.—Ottis, Eisenlohr & Co., of York, cigar manufacturers, recently purchased a plot, 221x348 ft., in Lancaster, and will erect a group of buildings.

DOVER, DEL.—The International Automobile & Engines Co., has been incorporated to build and operate an airship factory. Capital stock, $10,000,000. The incorporators are William D. Arnell, of Yeadon, Pa.; Elwood H. James, of Sharon Hill, Pa, and S. C. Seymour, of Camden, N. J. The company's charter authorizes it to manufacture airships, motorcycles and motorboats.

ASHEVILLE, N. C.—The American Cotton Goods Co., of Owosso, Mich., will establish a plant at Asheville for manufacturing canvas gloves, rompers, play suits, etc. It will be operated by electric power. D. K. Salisbury is Mgr.

GREENVILLE, N. C.—F. G. James is interested in a plan, it is reported, to establish a silk mill at Greenville.

BAMBERG, S. C.—The Bamberg Cotton Mills Co. is preparing to enlarge its plant at Bamberg.

ROCK HILLS, S. C.—The Arcade Cotton Mills Co., of Rock Hills, has awarded contracts for considerable new machinery to be added to its present equipment. This new machinery comprises 6,200 spindles and accompanying equipment for manufacturing cotton yarns. The contracts were awarded to the WOONSOCKET MACHINE PRESS CO., of Woonsocket, R. I.; the EASTON & BURNHAM MACHINE CO., of Pawtucket, R. I.; the FALES & JENKS MACHINE CO., of Pawtucket, R. I., and other prominent New England machinery makers.

FORT OGLETHORPE (Dodge Post-Office), GA.—Bids will be received by Capt. George Vidmer, Constr. Q. M., until 11 a. m., Nov. 15, for the construction of a sterilizing plant here.

WYLAM, ALA.—The Harbison-Walker Refractories Co., Farmers' Bank Bldg., Pittsburg, Pa, has plans for improvements to cost $100,000 at its plant, in Wylam, increasing the daily capacity from 35,000 to 70,000 fire bricks.

CHATTANOOGA, TENN.—Huntington & Sears., Archs., News Bldg., are preparing plans for an addition, two stories high, 40x40 ft., for the Davis Hosiery Mills. G. H. Miller is Pres., and W. B. Davis is Secy.-Treas.

CHATTANOOGA, TENN.—The Stone Fort Land Co. plans the erection of a 5-story and basement building on the Stone Fort property, to be occupied by the Palmer-Brock-Somers Co., clothing dealers and manufacturers. It will be of standard mill construction. The Palmer-Brock-Somers Co. was recently organized with a capital stock of $100,000, by Palmer Bros., of Charleston, Brock Bros., of Chattanooga, etc., The building will be owned by the Stone Fort Land Co., of which Z. C. Patten is Pres, and J. T. Lupton Vice-Pres. e

ROSSFORD, OHIO.—The Edward Ford Plate Glass Co. recently purchased 20 acres of land adjoining its plant at Rossford, and contemplates improvements and additions which will triple the capacity of the plant. About 1,000 men will be employed.

CLEVELAND, OHIO.—The Cleveland & Sandusky Brewing Co. will build an addition, 60 × 78 ft., adjoining their bottling works at the corner of Carroll Ave. and West 26th St. The building will be two stories high, of brick and concrete, and will be used for an extension to the bottling works. It is estimated that the cost will be $10,000.

CLEVELAND, OHIO.—Charles W. Cadek, Arch, 73 Marshall St., has prepared plans for a 2-story brick building, 36x80 ft., for the Svet Printing Co., at Broadway and Champa Aves. The masonry contract has been awarded to SEBEK BROS.

TOLEDO, OHIO.—We are officially advised that the contract for erecting the brass foundry and machine and pattern shop, for the Bunting Brass & Bronze Co., of Alliance, has been awarded to the H. J. SPIEKER CO., 409 Michigan St., Toledo. The company is now in the market for complete foundry equipment and office furnishings. George S. Mills, Ohio Bldg., Toledo, is the Arch. Cost, $20,000.

TOLEDO, OHIO.—George S. Mills, Arch., Ohio Bldg., is preparing plans for a factory building, five stories and basement, 150x100 ft., for the Woolson Spice Co., care of F. H. Biggs, Huron and Jackson Sts., and will receive estimates soon. The buildings are to be constructed of reinforced concrete, with composition roof, galvanized skylight and cornice, concrete floors, and electric fixtures will be used. Cost of plant, $65,000. A 2-story warehouse is also to be built, plans for which are being prepared by the same architect. Cost. $28,000.

COLUMBUS, OHIO.—A 2-story brick factory, to manufacture automobile trucks, and a garage, is contemplated on East Long St., by Oscar Lear, of Springfield.

TROY, OHIO.—Devore & McGormley, Engrs., Ohio Bldg., are preparing plans for a plant for the Troy Wagon Works, of Troy. The owners will receive estimates soon. The building is to be constructed of reinforced concrete, brick, with composition roof, and concrete floors, and will be one story high, 100 × 200 ft. Cost, $20,000. A paint shop is also planned.

LORAIN, OHIO.—The American Shipbuilding Co. has broken ground for an addition to its plant here. The forge shop has been completed and will be ready for use soon. The buildings to be erected here are a machine shop, pattern shop and foundry. These will cover an area of from four to five acres, and will have direct connection with a huge craneway 100 ft. wide.

TOLEDO, OHIO.—The Alliance Mfg. Co., of Streator, Ill., is contemplating the erection of a plant here, to manufacture wagons for ice cream cones and pop corn peddlars. A. S. Dietz, 125 Michigan St., Toledo, is interested.

CENTERTON, IND.—It is reported that Rothrock & Son will soon ask for bids for the erection of a grain elevator on the site of the building recently destroyed by fire.

DETROIT, MICH.—See item under Light and Power Plants.

DETROIT, MICH.—Louis Kamper, Fine Arts Bldg., is preparing plans for a 3-story automobile factory, 400x64 ft. for the Sherer & Wadsworth Co., 280 Jefferson Ave. The owners will purchase all materials and sublet contracts. The buildings are to be of reinforced concrete, stock brick, bedford stone, with composition roof, galvanized iron skylight and cornice, structural iron, concrete floors and electric fixtures. Cost, $60,000.

Varney, Winter & Varney, Equity Bldg., let the following contracts on Oct. 15, for the 3-story factory, 60x91 ft., for McRae & Roberts Co., 227 Campbell Ave.: Composition roofing to R. HUTTON & CO., 112 Fort St. E.; steam heating and plumbing to BEAN & DEVILLE, 1478 Woodward Ave.; painting to W. J. BLAKELY, 864 Hudson Ave.

Smith, Hinchman & Grylis, Washington Arcade Bldg., let the following contracts on Oct. 17 for the 3-story factory addition and bridge for the Hargreaves Mfg. Co., Thomas E. Reeder, Mgr., 60 18th St.: Structural iron work to H. B. LEWIS, 45 Joseph Campau Ave.; composition roofing and painting to MARTIN SCHOLL, 459 Michigan St.; carpentry to STRELLOW & PETT, 589 Mack Ave. Cost of plant, $30,000.

DETROIT, MICH.—The Bennett Axle & Transmission Co. filed articles of incorporation on Oct. 17, and is capitalized at $150,000. The company will erect a factory in Detroit immediately, for the manufacture of transmission gears and auto accessories. Stephen S. Bennett, of Chicago, is Pres.

Albert Kahn and E. Wilby, Trussed Concrete Bldg., are preparing plans, and will receive estimates soon on a 1-story boiler house for the Chalmers Motor Co., R. D. Chapin, Mgr., Jefferson Ave. and New Belt Line.

J. H. Christian, 243 Longfellow Ave., promotor, announces that the Ropp Motor Co. has been incorporated, and will erect a factory for the manufacture of automobiles.

The following contracts were awarded, we are officially advised, by Smith, Hinchman & Grylis, Archs., Washington Arcade Bldg., for the erection of a planing mill for the C. W. Kotcher Lumber Co.: Masonry, OTTO MISCH, Medbury and Moran Sts., Detroit; carpentry, C. W. KOTCHER; engine, WICKES BROS., of Saginaw; boiler, DETROIT SHIPBUILDING CO., foot of Orleans St., Detroit. The mill will be 65x140 ft.

CADILLAC, MICH.—The Grand Rapids and Indiana R. R. Co. has let the general contracts for their proposed roundhouse, containing 12 stalls, in Cadillac, to CHARLES HOERTZ & SON, Porter Block, Grand Rapids.

SAGINAW, MICH.—See item under Light and Power Plants.

CHICAGO, ILL.—Jenney, Mundie & Jensen, Archs., New York Life Bldg., Chicago, are preparing plans for a 4-story brick factory, at the southwest corner of Adams and Morgan Sts., on a plot 215x189 ft., for the Shotwell Mfg. Co., candy manufacturers. Martin A. Devitt and Albert H. Shotwell are officers of the company. Estimated cost, $60,000.

DULUTH, MINN.—The contract for constructing an addition to the Gogebic Steam Boiler Works on Lake Ave. has been awarded to GEORGE H. LOUNSBERRY, at $20,000. The building, which is to be 40x88 ft. in size, will be constructed of the Turner reinforced concrete, two stories high, with basement, and will be on the north side of the present building. With the new addition the Gogebic works will have a frontage on Lake Ave. of 160 ft., and 88 ft. deep. Radcliff & Price, Palladio Bldg., Duluth, are the architects.

OMAHA, NEB.—The Farmers' Co-operative Creamery Co., of which Charles Harding is Pres., plans the erection of a silo factory in Omaha.

TRUMANN, ARK.—The contract for erecting a mill here has been awarded to H. G. CHESIER, of South Bend, Ind., at $100,000.

SAN ANTONIO, TEX.—A chile con carne and tamale factory is planned in this city. The plant is to be conducted by J. P. Ward and William Gebhardt, Pres. and Vice-Pres., respectively, of the Gebhardt Chile Powder Co.

DENVER, COLO.—The Protecto Hydrocarbon Co., has been incorporated with a capital of $100,000, and will erect a factory in Denver for converting hydrocarbons into waterproofing material and compounds necessary in the manufacture of automobile tires and other similar rubber goods. Among the men interested in the organization are former Gov. James H. Peabody, Pres.; A. B. Frenzel, Consult. Eng.; Thomas Keely, J. Grattan O'Bryan and A. L. Kintner. Offices have been opened in the First National Bank Bldg., with Mr. Kintner as Mgr.

GLOBE, WASH.—It is reported that the mill of the Globe Lumber Co., recently destroyed by fire, will be rebuilt. F. Marks, of Long Beach, Wash., is interested.

LITTLEROCK, WASH.—The Taylor Lumber & Shingle Co. has been incorporated by F. Taylor, and J. Joyce, of Elma, and A McGratton. The company will build a sawmill at Maytown, four miles from Littlerock, on the Union Pacific R. R.

SEATTLE, WASH.—The Chlopeck Fish Co., Railroad Ave. and Vine St., plans to erect a 3-story storage plant at 2514 Railroad Ave. Estimated cost, $35,000.

SPOKANE, WASH.—Plans are being prepared for the erection of a plant in Spokane, for the Broadview Dairy Co., at an approximate cost of $30,000. F. Flood is Mgr.

We are officially advised that the Inland Empire Paper Co. is planning to erect a 2-story and basement paper and pulp mill, on a plot of four acres. It will be of concrete and brick construction. Bids will be received about November 15, for the construction of a dam in connection with the mill. Peter Mogensen is the Arch. W. A. Brayeau is Mgr. The estimated cost of the plant is $200,000 and the equipment, $200,000.

STEILACOOM, WASH.—A steel plant is to be erected here by A. P. Gillie, of Tacoma, it is stated.

PORTLAND, ORE.—E. F. Cannon, McKay Bldg., plans the erection of a factory on the East Side, for the manufacture of an electrical movable window display apparatus. It will be a 2-story and basement structure, 50x100 ft. The foundations and basement walls will be of concrete, and the superstructure of frame mill construction.

EL CENTRO, CAL.—The Imperial Valley Electric Co. has been organized here for the purpose of manufacturing electrical fixtures.

SACRAMENTO, CAL.—Plans for the building of an asphalt plant in Sacramento are being made by officials of the Ransome-Crummy Construction Co., and a site for the necessary buildings will be selected at an early date with the completion of other details now being arranged by the company.

SAN DIEGO, CAL.—The San Diego Paint & Fuel Co. will erect a paint and oil factory here.

SAN BERNARDINO, CAL.—About $150,000 is to be expended by the Atchison, Topeka & Santa Fe Ry. Co. in increasing the capacity of its pre-cooling plant at San Bernardino. The plant can now handle 128 cars in 24 hours, and the capacity is to be increased to 182 cars in the same length of time. J. Purcell is Supt. Shops, at Topeka, Kan.

VERNON (Grafton Post-Office), CAL.—The Southern California Chemical Co. plans the construction of a chemical plant, 100x200 ft., in Vernon. Among those interested in the enterprise are Henry Blumenberg, who will be Pres., W. D. Stephens, C. A. Fellows, F. C. Ripley. S. E. Durden, formerly with the Stuffer Chemical Co. of San Francisco, will be Gen. Mgr.

RENO, NEV.—William H. Brehans, of St. Louis, Mo., has prepared plans for a concrete packing house and cold storage plant to be built for McGill & Adams, of Ely, Nev. Cost, $35,000.

WELLAND, ONT.—The United Motors, Ltd., recently incorporated, will erect four buildings, one story high on a plot of five acres. They will be of concrete construction. Noted last week.

WOODSTOCK, ONT.—The Maximillian Machine Co., of Buffalo, N. Y., has agreed to erect a factory here as a Canadian branch for the manufacture of pneumatic hammers and drills. The company will be capitalized at $100,000.

WINNIPEG, MAN.—The Canada Metal Co, W. G. Harris, Pres., of Toronto, has purchased the plant of the Ontario Wind Engine & Pump Co., on Chambers St., and a new factory will be erected.

The Ontario Wind Engine & Pump Co. will remove to Logan St., where they will erect a new plant at a cost of about $100,000. J. M. Reid is the official in charge of the Ontario Wind Engine & Pump Co., at Winnipeg.

MISCELLANEOUS CONTRACTS.

U. S. RECLAMATION SERVICE.—All news concerning canal and irrigation projects, etc., will be found under Water Supply—Irrigation.

DREDGING.—Boston, Mass.—The contract for dredging in connection with the navy yard, Boston, bids opened on Oct. 15., has been awarded by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., to the EASTERN DREDGINDG CO., 247 Atlantic Ave., Boston, at 38.9 cts. per cu. yd. Noted on Oct. 20.

DREDGING.—Boston, Mass.—The Massachusetts Harbor and Land Commissioners, George E. Smith, Chn., will shortly advertise for bids for dredging in Annisquam River.

SCRAP MATERIAL.—Boston, Mass.—Bids are being asked by the Boston Elevated R. R. Co. for ten tons of old copper and 400 tons of wrought and malleable iron, stored at various yards. Apply to Purchasing Agent, 101 Milk St.

FILLING, ETC.—Boston, Mass.—Bids are asked by Louis K. Rourke, Supt. of Sts., until Nov. 4, for filling, slope paving and fence, Freeport St.

WALL AND FENCE.—Boston, Mass.—Bids will be received until Nov. 4 by the Schoolhouse Commission, Charles Logue, Chn., 120 Boylston St., for concrete wall and fence at Prescott School.

CHEMICAL AND HOSE WAGON.—Boston, Mass.—Bids will be received by Charles D. Daly, Fire Comr., until Nov. 14, for a chemical and hose wagon, motor type.

BATH-HOUSE.—Providence, R. I.—Bids for the construction of a public bath-house in Franklin Park were opened by the Board of Contract and Supply on Oct. 24. The bidders follow: P. E. HARDING, building, plumbing, heating and ventilation, and electric wiring, $10,000 (awarded contract), William Williams, construction alone, $7,980; F. D. McKendall, construction alone, $8,766; Hartwell & Kingstone, construction alone, $7,986; Famiglietti Bros., construction alone, $7,950; W. H. Hamlyn & Son, construction alone, $7,950.

*DREDGING.—Newport, R. I.—Bids will be received by Lieut.-Col. J. C. Sanford, Corps Engrs., U. S. A., Newport, until 2 p. m., Dec 3, for dredging Nantucket Harbor, Mass.

BARGE CANAL.—Albany, N. Y.—Bids will be received until noon, Nov. 22, by F. C. Stevens, State Supt. Pub. Wks., Albany, on Barge Canal Contracts Nos. 27-A, 37 and 82. The work included in the contracts follows: Contract No. 27-A. Champlain canal, Section 2, for completing the construction of the canal, together with all incidental work between Station 1046+16, the south end of Contract No. 25 at Dunham's Basin Rd. and the Hudson River at Fort Edward. Station 1245. Length, 3.76 miles; estimate, $409,455; Contract No. 37: for the improvement of the Oswego canal from Fulton to Oswego, a distance of 9.73 miles; estimate, $1,902,220; and Contract No. 82, for constructing new highway bridge superstructures over the Erie Canal in Monroe County between the Genesee River and the east end of Contract No. 6; estimate, $27,235. Contract Nos. 27-A and 37 have been advertised previously but no bids were received on either contract. The plans and specifications for both these contracts have been materially revised since the previous advertisement. Frank M. Williams is State Engr.

CANAL.—Albany, N. Y.—The improved Cayuga-Seneca canal will be constructed along the line of the present canal from Seneca Lake through Waterloo and Seneca Falls to Cayuga Lake at Mud Lock. This decision was reached by the State Canal Board on Oct. 25. It is planned to let the contracts for the work before Jan. 1. Frank M. Williams is State Engr.

DOCK AND BERTH.—Buffalo, N. Y.—Bids were received by the Department of Public Works, on Oct. 25, for constructing a dock and berth in the Erie Basin for use of the naval militia. The contract has been awarded to A. F. CHAPMAN 20 Breckenridge St., Buffalo, at $3,850. Francis G. Ward is Comr.

LIGHTHOUSE.—Crown Point, N. Y.—The committee appointed by the Lake Champlain Tercentenary Commission of the States of New York and Vermont has decided it is reported that the proposed memorial to Samuel de Champlain, discoverer of the lake bearing his name, shall take the form of a lighthouse, to be erected probably at Crown Point. No plans have been drawn as yet.

*SUBWAY SYSTEM, ETC.—New York, N. Y.—Bids for the construction, equipment and operation of the Tri-Borough Subway and Elevated System of New York City, comprising about 44 miles of line, with municipal money, were received by the Public Service Commission on Oct. 27. Detail bids are given under Contract Prices.

DREDGING.—New York, N. Y.—The contract for dredging in the channel north of Shooters Island, N. Y. and N. J., has been awarded to WILLIAM BEARD & CO. Bids were opened on Oct. 21, List of bidders noted on Oct. 27.

REPAIRS TO PIERS.—New York, N. Y.—Bids were received by Calvin Tomkins, Comr. of Docks, on Oct. 27, for Contract No. 1244, for furnishing all the labor and materials required for making repairs to Pier 5, East River, Boro. Manhattan. The lowest bidder was the Butler Bros. Construction Co., 1170 Broadway, New York, at $13,588.

AUTOMOBILE.—New York, N. Y.—Bids will be received by the Park Board, until 3 p. m., Nov. 10, for furnishing and delivering one automobile for parks, Boro. The Bronx. Charles B. Stover is Pres.

CLAY LOAM.—New York, N. Y.—Bids will be received by the Park Board until 3 p. m., Nov. 10, for furnishing and delivering 430 cu. yds. of clay loam for Parks, Boro. The Bronx.

SHELTERS.—New York, N. Y.—Bids are asked until 2 p. m., Nov. 10, by Kingsley L. Martin, Bridge Comr., for the construction of shelters in the Harlem River bridges and on the Vernon Ave. Bridge.

BATH-HOUSE.—New York, N. Y.—Bids will be received by Alfred E. Steers, Pres. Boro. of Brooklyn, until 11 a. m., Nov. 9, for furnishing all the labor and material for the erection and completion of a municipal bath-house on the southeast corner of the Concourse Drive and West Fifth St., Coney Island, Boro. of Brooklyn.

DREDGING.—New York, N. Y.—The contract for dredging at the navy yard, New York, bids opened by the Bureau of Yards and Docks, Navy Dept., Washington, D. C., on Oct. 15, has been awarded to R. G. PACKARD, 130 Pearl St., New York, at 16 4-9 cts. per cu. yd. List of bidders noted on Oct. 20

WATERFRONT IMPROVEMENT.—New York, N. Y.—The Sinking Fund Commission has approved plans for the improvement of the waterfront along the Harlem River from 140th to 155th Sts. Considerable private property will have to be acquired before the actual building of piers and bulkheads can be begun, but it is understood that the city authorities intend to carry the matter forward with all possible speed.

Under the plan of improvement a marginal street, varying in width from 30 to 70 ft., will be built from 140th St. to Central Bridge. Between these limits there will be provided seven piers and nine slips, or basins. Most of the piers will be 60 ft. wide and about 220 ft. long, extending from the bulkhead line to the pierhead line. At the foot of 141st St. a pier 160 ft. wide, will be built.

BATH-HOUSE.—Philadelphia, Pa.—Bids have been opened by the city for a public bath-house on Lombard St. Contract has been awarded to JOHN R. WIGGINS & CO., Heed Bldg., Philadelphia, at about $27,000. George R. Stearns is Dir. Pub. Wks.

*DREDGING DIKE.—Philadelphia, Pa.—Contract has been awarded by Maj. Herbert Deakyne, Corps Engrs., U. S. A., 815 Witherspoon Bldg., Philadelphia, to the ATLANTIC GULF & PACIFIC CO., 13 Park Row, New York, for dredging and dike construction in Delaware River between Philadelphia and Trenton as follows: (a) Mud Islands Section, 100,000 cu. yds. channel excavation, 800 ft. dike construction, (b) Kinkora Section, 90,000 cu. yds. channel excavation; (c) Bordentown Section, 260,000 cu. yds. channel excavation, 5,200 ft. dike construction; (d) Duck Island Section, 370,000 cu. yds. channel excavation; (e) Biles Island Section, 280,000 cu. yds. channel excavation, 1,800 ft. dike construction. List of bidders noted on Oct. 6.

MASONRY AND EMBANKMENT.—Philadelphia, Pa.—Bids were received on Oct. 11 as follows by the Philadelphia & Reading Ry. Co., Philadelphia, for Richmond branch elevated Contract No. 22, for masonry and embankment between Somerset St. and Trenton Ave.: Whiting-Middleton Construction Co., Pexton Bldg., Baltimore, Md., $186,859; Ryan & Reilly, Coleman Bldg., Philadelphia, Pa., $153,067; American Paving & Construction Co., 211 South Ninth St., Philadelphia, $133,599; James McGraw Co., 1010 Arcade Bldg., Philadelphia, $130,351; JOHN McMENAMY, 401 Harrison Bldg., Philadelphia, $117,426 (awarded contract).

RETAINING WALLS.—Turtle Creek, Pa.—Bids will be received until Nov. 7, by Philip Jones, Chm. St. Com. of Councils, for constructing retaining walls on Monroeville Road, Stewart St. and Brown Ave.

SAND AND GRAVEL.—Erie, Pa.—The contract for supplying all the sand and gravel required in the construction work at the General Electric Co. has been awarded to the ERIE SAND & GRAVEL CO., Erie.

LIFTING MAGNETS.—Aliquippa, Pa.—The CUTLER-HAMMER CO., Milwaukee, Wis., has been awarded contract by the Jones & Laughlin Steel Co., Pittsburg, Pa., for two 50-ton lifting magnets to be installed in the company's plant here.

*DREDGING.—Wilmington, Del.—Bids will be received by Maj. R. R. Raymond, Corps Engrs., U. S. A., Wilmington, until noon, Dec. 1, for dredging Salem River, N. J.

BATH-HOUSE AND COMFORT STATION.—Baltimore, Md.—Bids were opened by the Board of Awards on Oct. 26, for the proposed public bathhouse and comfort station to be erected on Greenmount Ave., Harford Ave. and Monument St. for the Free Public Bath Commission, William H. Morris, Secy. P. J. Cushen, 213 Courtland St., was the lowest bidder at $43,645. New bids will probably be asked as this bid is $20,000 more than the appropriation.

*LUMBER.—Washington Barracks (Washington, D. C., post-office), D. C.—Bids will be received until noon, Dec. 1, by Maj. W. J. Borden, Corps Engrs., U. S. A., for furnishing white pine lumber for pontoon bridge equipage.

STEEL PIPE.—Washington, D. C.—The following bids were received by the Commissioner of the District of Columbia, on Oct. 26, for furnishing 1,218 ft. of 30-in. sheet steel pipe: The East Jersey Pipe Co., New York, $5,420; A. D. Granger Co., New York, $5,678.

LIFE-SAVING STATION.—Washington, D. C.—All bids received by the Superintendent of the Life-Saving Service, Washington, D. C., on Oct. 14, for the construction of a life-saving station at Green Hill, South Kingston, R. I., have been rejected. New specifications will be prepared and new bids asked.

LETTER BOX POSTS.—Washington, D. C.—Bids are asked until 2 p. m., Nov. 4, by T. A. Holmes, Purchasing Agt., Post Office, Dept., Washington, for furnishing 2,000 letter box posts at the earliest practicable date.

PROJECTILES.—Washington, D. C.—The Secretary of The Navy has awarded contracts as follows, for furnishing 2,400 14-in. projectiles, bids opened on Oct. 5: BETHLEHEM STEEL CO., South Bethlehem, Pa., 600 at $500 each; CRUCIBLE STEEL CO. of America, Pittsburg, Pa., 600 at $500 each; and FIRTH-STERLING STEEL CO., Giesboro Manor, D. C., 1,200 at $410 each.

WIRE.—Washington, D. C.—The following bids were received by the Chief Signal Officer, U. S. A., Washington, on Oct. 26, under Proposal 487, for Item (1) 500 miles field wire, 11-strand and Item (2) three miles field wire, twin conductors: Safety Insulated Wire & Cable Co., Washington, Item (1) $68.50 per mile; delivery 25 miles monthly. Atlantic Insulated Wire & Cable Co., 120 Liberty St., New York (1) $50.95 per mile; (2) $98 per mile; 60 to 100 m[illegible] monthly. Hazard Mfg. Co., 50 Dey St. [illegible] York (1) $66 per mile; (2) $71.50 p[illegible]ile; delivery 25 miles in 90 days a[illegible] 25 miles monthly. The Okonite Co., N[illegible]ork (1) $88.70 per mile; (2) $128.22 p[illegible]ile; delivery 210 days.

LIFE-SAVING STATION.—W[illegible]ton, D. C.—Bids were opened on Oct. 1[illegible] the U. S. Life-Saving Service, Washin[illegible] D. C., for moving and making repairs [illegible] improvements to the Paul Gamiels Hill [illegible] life-saving station, Seventh District [illegible] follows: Evans & Meekins, Manteo, N. [illegible] $9,500; E. Hart, Norfolk, Va., $6,015.

HOSE.—Washington, D. C.—[illegible] will be received by the Commissioners [illegible] of Columbia, until 2 p. m., Nov. [illegible] for furnishing and delivering during [illegible] remaining portion of the fiscal year [illegible] June 30, 1911, about 15,000 ft., of 2[illegible] cotton-covered, rubber-lined hose for [illegible] the fire and other departments of the [illegible]rnment of the District of Columbia.

*DAMS.—Wheeling, W. Va.—Co[illegible]s were signed on Oct. 27 by Capt. F. W[illegible] Staetter, Corps Engrs. U. S. A., for the [illegible]tion of dam No. 12, one mile above this c[illegible] and No. 19, located at Hockingport, O[illegible] The PNEUMATIC CAISSON CO., 19 E[illegible] 23d St., New York, is the successful bidd[illegible] both contracts, the dam at this city to [illegible] built for $908,492 and the Little Hockin[illegible]am for $649,730. The contract for No. [illegible] does not include any shore work or the con[illegible] piers for the bear traps, this work ha[illegible] been completed by the Hollerbeck & Ma[illegible] Co. last fall.

CEMENT.—Wheeling, W. Va.—Bids were received by Capt. F. W. Alstaett[illegible] Corps Engrs., U. S. A., on Oct. 29 for 8,000 bbls. of Portland cement for Dam No. 2[illegible], Ohio River. The bids follow: (a) 8,000 bbls. in sacks; (b) brand; (c) allowance for return of sacks: The Thomas D. Proesser Co., Wheeling, (a) $1.59, (b) giant, (c) 7½ cts.; The Ironton Portland Cement Co., Ironton, Ohio, (a) $1.73, (b) limestone, (c) 10 cts.; Alpha Portland Cement Co., Easton, Pa., (a) $1.46, (b) alpha, (c) 7½ cts.; Lehigh Portland Cement Co., Cleveland, Ohio, (a) $1.49, (b) Lehigh, (c) 7½ cts.; The Atlas Portland Cement Co., New York, N. Y., (a) $1.54, (b) Atlas, (c) 7½ cts.; The Superior Portland Cement Co., Cincinnati, Ohio, (a) $1.63, (b) Superior, (c) 10 cts.; Universal Portland Cement Co., Chicago, Ill., (a) $1.54; (b) Universal, (c) 10 cts.

PARK.—Huntington, W. Va.—The city has employed a landscape gardner to convert a 50-acre tract into a municipal park. The work will be started this winter and the park is to be completed next summer. The state and the city are jointly bearing the cost which is to be about $75,000.

*STEEL FORGINGS, CASTINGS, ETC.—Charleston, S. C.—Bids will be received by Capt. E. M. Adams, Corps Engrs., U. S. A., until noon, Nov. 24, for furnishing steel forgings, castings, etc., for Granby dam, Congaree River, S. C. Advertised last week.

STEEL VAULT.—Atlanta, Ga.—Contract has been awarded to the MOSLER SAFE CO., Hamilton, Ohio, by the Third National Bank, Atlanta, for the installation of a steel vault in the bank.

STERILIZING PLANT.—Fort Oglethorpe, Ga.—See item under Manufacturing Plants.

DREDGING.—Jacksonville, Fla.—Bids for dredging Caloosanatchee River and entrance, Fla., were received by Capt. George R. Spaulding, Corps Engrs., U. S. A., Jacksonville, on Oct. 20, as follows: Bowers Southern Dredging Co., Galveston, Tex., $50,100; Sections A and B, 18 cts., Sections D. E. and F, 11 cts. Home Dredging Co., Mobile, Ala., $55,630, Sections A and B, 17 cts., Sections D. E. and F, 14½ cts.; Hilsboro Dredging Co., Tampa, Fla., $54,595. Section A and B. 16½ cts.; Sections D, E and F, 14.3 cts. Southern Dredging Co., Mobile, $59,572; Sections A and B, 17.95 cts.; Sections D, E and F, 15.7 cts.

PONTOONS.—Mobile, Ala.—A contract has been awarded to SIDOINE KREBS AND T. C. GATTI, of Pascagoula, Miss., for 61 pontoons to be built for use of the dredge Pasagoula, at $8,546. The dimensions of the pontoons are to be 25 ft. 4-in. long, [illegible]-ft. wide and 5-ft. deep.

BULKHEADING.—Mobile, Ala.—The city has awarded the contract to the HOME DREDGING CO., Mobile, at $12,987 for placing a 10-ft. apron and bulkheading city wharves from St. Anthony to St. Francis Sts. Noted on Oct. 27.

CANAL.—Rosedale, Miss.—The contract has been awarded to R. H. McWILLIAMS, Arcola, Ill., for the reclamation of 24,000 acres of land in Bolivar County. The contract price is $76,000. The principal drain will be a canal, 32 miles long, from 20 to 50 ft. wide.

PIPE-LINE.—Shreveport, La.—The J. C. Trees Oil Co. having offices at Shreveport, and about 30 oil wells in the Cuddo Oil field will build a 5,000 barrell oil refinery and construct a pipe-line from their wells to Shreveport about 35 miles at a cost of about $500,000.

CREOSOTED PILES, ETC.—New Orleans, La.—Bids were received as follows on Oct. 26, by Lieut-Col. Lansing H. Beach, Corps Engrs., U. S. A., for furnishing and delivering creosoted piles and walling timbers on the river bank or wharves in Southwest Pass, Mississippi River: (a) piles, (b) walling timbers: Salem Brick & Lumber Co., Ltd., New Orleans, (a) $10,8[illegible] (b) $2,370; Robinson Lumber Veneer & Box Co., Ltd., New Orleans, (a) $11,304 (b) $1,918; Peter Eckald, Biloi, Miss., (a) $11,3[illegible] (b) $2,772; M. W. Jay, New Orleans, (a) $12,500 (b) $2,130.

UNDERGROUND FIRE-ALARM SYSTEM—Louisville, Ky.—The Board of Public Safety, on Oct. 17, awarded a contract to the JAMES CLARK, JR., CO. for the underground fire-alarm system here at $26,971.

REVETMENTS, GUIDE-WALLS, ETC.—Cincinnati, Ohio.—Bids for constructing revetments, guide-walls, etc., on the Muskingum River were received by Maj. John C.

Oakes, C rps Engrs., U. S. A., on Oct. 26, as follows dward T. Landor, Canton, Ohio, $18,731 Clifton Bros., Zanesville, Ohio, $16,370.

ELIM ATION OF GRADE-CROSSINGS.—Clevel Ohio.—Bids are asked until 11 a. m., N 16, by John T. Goldenbogen, Clk. County ms., Cleveland, for labor and material essary for the elimination of the grade- ing of the Pennsylvania and W. & L. R. R., Dunham Road, in Bedford Towns by the construction of an overhead ge across the railroads on Dunham R between Granger Road and Bedford R

BRE VATER.—Cleveland, Ohio.—Contract reported has been awarded to the BREAK TER CO., Philadelphia, Pa., for constru g the east breakwater at Cleveland at abou 600,000.

DOCK Cleveland, Ohio.—Plans for a $75,000 d improvement to be carried forward by the e R. R. Co., along the west bank of the ver between Columbus Road and Center have been announced by Robert Hoffman, City Engr.

*STO DAM, ETC.—Cincinnati, Ohio.—Bids re received by Maj. John C. Oakes, orps Engrs., U. S. A., on Oct. 27 a follows for the construction of one loose st dam and shore protection near foot of ters Island, Ohio River Contract Co., Ev sville, Ind., $12,520. Oscar F. Barrett, incinnati, $10,990.

DITCH Monticello, Ind.—The Commissioners o White County have awarded a contract r the construction of the Chilton ditch to OD KENT at $18,000, partly open and partl tile, and the Elwood Greist ditch, all tile, t M. R. GREIST.

DRAIN.—Lebanon, Ind.—The Commissioners of Boone County will receive bids until Nov. 24, for the construction of a sanitary drain, 2,563 ft. long, leading out of Lebanon. Edmon Conner is City Clk.

COLLERIES.—Clinton, Ind.—The Bunsen Coal Co. is preparing to let a contract for the construction of twin collieries near here. The plant will be constructed of reinforced concrete. A smokestack 175 ft. high and 11 ft. in diameter on the interior at the top is also to be constructed of concrete.

STEEL FOR GATES.—Detroit, Mich.—Bids for furnishing and delivering 118 tons of steel, etc., for canal gates were opened on Oct. 24, by Col. C. McD. Townsend, Corps Engrs., U. S. A., Detroit, as follows: Lawrence D. Weaning, Cleveland, Ohio, $9,594; Milwaukee Bridge Co., Milwaukee, Wis., $10,728; Detroit Bridge & Steel Works, Detroit, $12,092; Penn. Bridge Co., Beaver Falls, Pa., $14,335; George W. Jackson, Inc., Chicago, Ill., $15,895; New Jersey Foundry & Machine Co., New York, $17,943; Minneapolis Steel & Machinery Co., Minneapolis, Minn., $19,359; Whitehead & Kales Iron Works, Detroit, $21,884.

ROLLER COASTER, ETC.—Detroit, Mich.—The Ingersoll Engineering & Construction Co., Pittsburg, Pa., has bought the site formerly occupied by Electric Park, at Jefferson Ave. and Belle Isle Bridge, Detroit, and will immediately start work on a $100,000 roller coaster and amusement resort. The site selected is 600 × 100 ft.

*REPAIRS TO CANAL WALLS.—Detroit, Mich.—Bids will be received by Col. C. McD. Townsend, Corps Engrs., U. S. A., until 3 p. m., Nov. 15, for repairs to canal walls at Sault Ste. Marie, Mich.

SUBWAY.—Bloomington, Ill.—Plans are being prepared for the proposed subway under the railway tracks at Allen and Front Sts. Elmer Folsom is City Engr.

DREDGING.—Alton, Ill.—The War Department has approved the recommendations for the expenditure of $5,000 for dredging the ice harbor at Alton Slough near here.

LOCKERS.—Chicago, Ill.—Bids were opened on Oct. 19, by Lieut.-Col. Thomas Cruse, Ch. Q. M., U. S. A., Chicago, for furnishing 3,000 metal wall lockers, as follows: Hess Warming & Ventilating Co., 131 Laclede St., Chicago, single, $8.62; double, $8.64; triple, $7.85; quadruple, $7.74, total, $24,156; Merritt & Co., Philadelphia, single, $11.22; double, $10.22; triple, $9.72; quadruple, $9.32, total, $30,456; General Fire Proofing Co., Youngstown, Ohio, total for all, $27,750.

DRAINAGE DISTRICT.—Rockwell City, Iowa.—C. O. Dixon, County Audr., will receive bids until 1 p. m., Nov. 14, for the construction of drainage district No. 122, comprising 25,464 yds. of excavation. Estimated cost, $7,486.

DRAINAGE.—Hampton, Iowa.—Bids will be received until Nov. 4 by F. G. Luke, County Audr., Hampton, for constructing work in drainage districts as follows: No. 8, laying 6,500 ft. 14, 15, 16 and 20-in. tile, with bulkhead and catch basins; No. 10, excavating 135,100 cu. yds. of dirt and the laying about 68,100 ft. of 7 to 20-in. tile and building 9 head walls of concrete; No. 14, laying 10,040 ft. of 7, 8, 10, 12, 15 and 18-in. tile and concrete bulkhead.

DITCH.—St. Peter, Minn.—Bids will be received until Nov. 14 by A. H. Freeman, County Audr., at St. Peter, for constructing Ditch No. 30, approximating 18,111 yds. excavation. Estimated cost, $3,622.

DITCH.—Morris, Minn.—F. E. Ware, County Audr., Morris, will receive bids until Nov. 4 for constructing Ditch No. 10, about 76,200 yds. of evcavation. Estimated cost, $7,621.

STE M BOILER.—Biwabik, Minn.—Bids accom nied by specifications will be received y the Village Council until 8 p. m., Nov. 12, for one steam boiler on trucks of 15 HP or thereabouts. H. J. Millbrook is Recdr.

FIR ENGINE.—West Duluth (Duluth post-o e), Minn.—Bids are asked until Nov. 4 the Board of Fire Commissioners for a oline automobile fire engine. This is a p ponement from Oct. 28.

DREDGING, ETC.—West Duluth, Minn.—The ZENITH DREDGE CO. has been awarded contract by the Carnegie Fuel Co. for the dredging and dock filling required in conjunction with the construction of the fuel company's new dock here.

BREAKWATER EMBANKMENT.—Duluth, Minn.—Bids were received as follows on Oct. 19 by Lieut.-Col. Graham D. Fitch, Corps Engrs., U. S. A., for breakwater embankment at Marquette, Mich., bids submitted for rock in place in the embankment per 2,000-lb. ton: Thomas L. Durocher, Sault Ste. Marie, Mich., 99¾ cts.; Powell & Mitchell, Marquette, $1,344; Francis L. McDonald, Duluth, 84 cts., recommended for award; Alexander Sang, Duluth, $1.45; Great Lakes Dredge & Dock Co., Chicago, Ill., $1.75; Northern Dredge & Dock Co., Duluth, $1.67 and $1.56 (for quartzite).

DITCH.—Marshall, Minn.—A. G. Lundgren, County Audr., will receive bids until 2 p. m., Nov. 4, for the construction of judicial ditch No. 9, approximating 797,381 yds. of excavation. Estimated cost, $81,291.

LUMBER.—Seattle, Wash.—Bids will be received until 11 a. m., Nov. 10, by E. C. Long, Q. M., U. S. A., Arcade Annex, Seattle, for furnishing and delivering 229,082 ft. B. M. lumber, 132,650 ft. same, 100,000 ft. same and 223,500 shingles for delivery at Seattle or Tacoma, Wash., or other Puget Sound ports, Portland or other Pacific coast ports accessible to vessels of deep draft or f. o. b. railroad wharf, Honolulu, H. T.

HEAD LATHES.—Kansas City, Mo.—Bids will be received until Nov. 10 by the Board of Fire and Water Commissioners, E. B. Harrington, Secy., for furnishing f. o. b. cars, Kansas City, at the Turkey Creek station, a 36-in. × 24-ft., a 20-in. × 18-ft. and a 16-in. × 12 ft. all-geared head lathe with constant speed motor drive.

DRAINAGE SYSTEM.—Star City, Ark.—The Commissioners of Lincoln County, Star City, have organized the Grassy Lake Drainage District to drain about 4,000 acres of land. Parkes & White, Engrs., Pine Bluff, Ark., have charge of surveys. Edward Young, Youngstown, Ark., is Secy.

CEMENT.—Houston, Tex.—Contracts involving 100 carloads of cement have been let to the BROWNE BUILDERS' SUPPLY CO., by the William Miller & Sons Co., general contractors for the Rice Institute, Sunset and Carter contracts.

RIPRAPPING.—Los Vegas, N. Mex.—The sum of $40,000 has been appropriated by the Atchison, Topeka & Santa Fe Ry. Co. on the Arizona, division, to provide riprapping between mile-posts 588 and 591. B. H. Newbees is Division Engr., Las Vegas.

DAM.—Spokane, Wash.—See item under Manufacturing Plants.

STEEL, COPPER, ETC.—Bremerton, Wash.—Bids will be received until Nov. 8, by the Bureau of Supplies and Accounts, Navy Dept. Washington, D. C., for furnishing at the Navy Yard, Puget Sound, Wash., the following supplies; Schedule 2,987, 9,000 lbs. medium steel: 21,000 lbs. of medium bar steel, 3,500 lbs. Class B bar steel; Schedule 2,989, 5,900 lbs. sheet cooper, etc. Applications for proposals should designate the schedules desired by number.

EXCAVATION.—Seattle, Wash.—Bids for excavation work on the Lake Washington Canal between Fremont and Salmon Bay, will be asked by the United States engineer's office. The contract will approximate $100,000.

DREDGING.—Seattle, Wash.—Bids for dredging Olympia Harbor, Wash., were received by Capt. Arthur Williams, Corps Engrs., U. S. A., Seattle on Oct. 14 as follows: Standard American Dredging Co., San Francisco, Cal., 14.9 cts per cu. yd.; International Dredging Co., Sumter, Wash., 17.3 cts.; PUGET SOUND BRIDGE & DREDGING CO., Sumter, 10.8 cts. (awarded contract); Tacoma Dredging Co., Tacoma, Wash., 13.75 cts.

AIR PUMP, ETC.—Seattle, Wash.—The Nickerson-Macfarlane Machine Co., Tacoma, Wash., has submitted the lowest bid to the Constructing Quartermaster, U. S. A., Seattle, for installing an air pump and thrust shaft, and retubing the auxiliary condenser, with minor alterations, on the cableship Burnside.

DREDGING.—Seattle, Wash.—The Tacoma Dredging Co., California Bldg., Tacoma, Wash., submitted the only bid on Oct. 22 to Capt. Arthur Williams, Corps Engrs., U. S. A., Seattle, for dredging Hammersley Inlet, at 48 cts. per cu. yd.

OIL TANK. — Bellingham, Wash. — The Board of Public Works has granted a permit to the B. B. & B. C. R. R., to erect a 5,000 barrel oil tank on a site below Elk St., between Ivy and Myrtle Sts., the work to be done according to the directions of J. J. Marsh, Fire Chief.

*EXTENDING BREAKWATER.—Los Angeles, Cal.—Bids will be received until 11 a. m., Dec. 1, by Capt. W. P. Stokey, Corps Engrs., U. S. A., 723 Central Bldg., Los Angeles, for extending shoreward the breakwater at Los Angeles Harbor.

FURNACES.—Heroult, Cal.—The Noble Electric Steel Co., is preparing to install five additional furnaces at its smelter at Heroult. Estimated cost, about $300,000.

CREOSOTED PILING.—Los Angeles, Cal.—The Board of Public Works has awarded to the PACIFIC CREOSOTING CO. the contract for furnishing creosoted piling to be used in the construction of the first section of municipal wharves, to be built in the inner basin of Los Angeles harbor, at Wilmington, at $5,000.

DREDGING.—Los Angeles, Cal.—Bids are asked by the Board of Public Works until 11 a. m., Nov. 14, for dredging a 25-ft. channel to the site of the proposed new municipal wharf at Wilmington.

PIER.—Los Angeles, Cal.—The Ocean Park Promotion Syndicate has awarded to CHARLES W. CORBALEY, Los Angeles, contract for the construction of the new reinforced-concrete pier at the foot of Navy St. This structure will be 50 ft. wide and about 500 ft. long.

FREIGHT ELEVATORS.—Los Angeles, Cal.—The S. M. Bernard Co. have awarded contract to M. P. THYE, 823 South Main St., Los Angeles, for installing three hydraulic plunger freight elevators in a brick building now being erected on Central Ave. Cost, $5,665.

ROAD ROLLER.—Bakersfield, Cal.—See item under Streets and Roads.

TUNNEL.—San Francisco, Cal.—See item under Streets and Roads.

CONCENTRATING PLANT.—Frisco, Utah.—The Horn Silver Mining Co., Frisco, is considering the construction of a 100-ton concentrating plant here. M. C. Morris is Gen. Mgr.

FIRE KILLED TIMBER.—Idaho.—W. B. Greeley, District Forester, Hammon Blk., Missoula, Mont., advised us that the government will sell the fire killed timber in the Northwest. This represents the timber killed by the forest fires during the last summer. The bulk of the timber, which offers apportunities for large and small operations is on the waterstreet of five large rivers; the St. Joe and Coeur d' Alene Rivers in the Coeur d' Alene National Forest, Idaho; the St. Regis drainage in the Lolo National Forest; the drainage of the Flathead River in the Blackfeet, Flathead and Lewis and Clark National Forest Mont.; and the tributaries of the Clark Fork in the Cabinet National Forest, Mont. It is estimated that there is over 900,000,000 ft. of accessible timber on the St. Joe Watershed alone.

ICE HOUSES.—Ottawa, Ont.—Bids will be received by the National Transcontinental Ry. Comrs., P. E. Ryan, Secy., Ottawa, until Nov. 15, for the construction of ice houses for the railway at Springfield, Man., Redditt, Man., and Graham, Ont., to be completed before Feb. 15, 1911. Gordon Grant is Ch. Engr., Ottawa, and S. R. Poulin, Dist. Engr., St. Boniface, Man.

CONCRETE PIERS.—Toronto, Ont.—The McGUIGAN CO., has secured the contract for erecting ten sets of concrete piers to support the steel towers for carrying the Hydro-electric cables from a point opposite the High Park gate to within a short distance of the Exhibition grounds.

STEAMER.—Ottawa, Ont.—Capt. A. Foster, of Smith's Falls, has awarded contract to the DAVIS DRY DOCK CO., Kingston, Ont., for a steel passenger and freight steamer, 100 ft. long, for use on the Rideau Canal.

VENTILATING APPARATUS. — Toronto, Ont.—The Provincial Government has awarded the contract for installing the ventilating apparatus in the Parliament buildings to PURDY, MANSELL & CO., Toronto. The installation involves changes in the existing system, and will apply to the burned portion of the buildings, now being rebuilt, and the new northern wing.

The cost will be about $50,000.

MEMORIAL TOWER.—Halifax, N. S.—Contract has been awarded to S. M. BROOKFIELD, LTD., for the completion of the Canadian Club's memorial tower, at $23,960. Other bidders were: Falconer & MacDonald, $24,829; S. A. Marshall & Son, $29,762; M. E. Keefe Construction Co., $34,160.

FIRE ALARM STATION.—Winnipeg, Man.—D. D. WOOD, Winnipeg, has been awarded the contract for the erection of a fire alarm signal service station at $62,711.

WHARF.—Port Mann, B. C.—The Canadian Northern Ry. Co., has awarded to the NORTHERN CONSTRUCTION CO., contract for building a wharf, 1,000 ft. long and 100 ft. wide.

DIKE.—Dewdney, B. C.—GEORGE H. WEBSTER, Vancouver, B. C., has been awarded the contract for a 7-mile dike here. Estimated cost, $80,000.

DREDGE.—Vancouver, B. C.—The SIMON SHIPBUILDING CO., Glasgow, Scotland, has been awarded the contract for a deep water dredge. Cost, $210,000.

RECLAMATION.—Hawaii.—It is reported that a large reclamation project is now being planned by Govern Frear, Atty.-Gen. Lindsay and John T. McCrosson. The project is to turn the desert of Kau, on the island of Hawaii into fertile land. It is proposed to construct a large irrigation ditch around the mountain of Mauna Loa through Kau to carry the waters from the mountain. The proposed ditch would be 90 miles long, would cost not less than $3,000,000. In order to carry the scheme into effect, at least two acts of Congress will be necessary.

DREDGING.—Alaska.—The Alaska Mining Development & Power Company has been organized by J. W. and H. Hennis of Moclips, Wash., with $200,000 paid in capital. The object is to dredge the beach sands at Nome.

U. S. POSSESSIONS.

STEEL GATES.—Panama.—The McCLINTIC-MARSHALL CONSTRUCTION CO., Pittsburg, has been awarded contract for gates and other equipment for the locks of the Panama Canal. It is estimated that 60,000 tons of steel will be required. Estimated cost, $5,500,000.

HOISTING ENGINES.—Panama.—Bids will be received by Capt. F. C. Boggs, Corps Engrs., U. S. A., Gen. Purchasing Office Isthmian Canal Comn., Washington, D. C., until Nov. 4, under Canal Zone requisition 4802-A for furnishing two hoisting engines, 3-drum, with boiler and swinging gear.

STEEL BARS.—Panama.—Bids were received as follows on Oct. 31, by Capt. F. C. Boggs, Gen. Purchasing Officer, Isthmian Canal Comn., Washington, D. C., for square reinforcing bars of various sizes, under Class 1, Circular 609: Belmont Iron Works, Philadelphia, $30,475; Concrete Steel Co., 29 Broadway, New York, $25,355; Corrugated Bar Co., St. Louis, $25,109; Crucible Steel Co. of America, Pittsburg, $30,930; Mississippi Valley Construction Co., St. Louis, $26,120; Gilbert Iron & Steel Co., New York, $31,410; J. B. Kendall Co., Washington, $24,524.

LUMBER.—Panama.—Bids were received as follows on Oct. 27, by the General Purchasing Officer, Isthmian Canal Comn., Washington, D. C., for furnishing about 600,000 ft. B. M. of yellow pine or Douglas fir lumber, under Circular 608, Class 1: A. S. Bacon & Sons, Savannah, Ga., $14,525; Bayshore Lumber Co., Mobile, Ala., $12,164; Chicago Lumber & Coal Co., $12,222; G. Elias & Bro., Buffalo, $13,641; William D. Gill & Sons, Baltimore, $14,667; Hinton Bros. Co., Lumberton, Miss., $13,295; Lacey Lumber Co., Carrier, Miss., $12,753; A. G. Little Lumber Co., Richardson, Miss., $12,468; Pine Belt Lumber Co., Hattiesburg, La., $14,023; W. R. GRACE & CO., San Francisco, $11,619, on Douglas fir, Port of Ancon delivery (awarded contract); Natal-Ancon delivery (awarded contract); Malbany Lumber Co., Hammond, La., $13,418; S. E. Naylor & Co., Gulfport, Miss., $12,245. All bids on yellow pine, delivery Colon, unless otherwise specified.

LOCK VALVES.—Panama.—Bids were received as follows on Oct. 27 by Capt. F. C. Boggs, Gen. Purchasing Officer, Isthmian Canal Comn., Washington, D. C., supplementary to the bids opened on Oct. 1, under Circular 596, for Stoney gate and cylindrical valves to be used in connection with the lock system at Panama: Class 1, proposal 1, two Stoney gate valve machines; 1-a, 46 Stoney gate valve machines; Class 2, proposal 1, two cylindrical valve machines; 1-a, 38 cylindrical valve machines: American Ship Windlass Co., Providence, R. I., (1-1) $25,100; (1-1a) $441,600; (2-1) $2,680; (-1a) $45,600. D'Olier Engineering Co., Philadelphia, (2-1) $5,980; (2-1a) $50,540; (1-1) $28,550; (1-1a) $429,640; alternate, (1-1) $27,650; (1-1a) $408,940. Poole Engineering & Machine Co., Baltimore, Md., (1-1) $25,750; (1-1a) $396,750; (2-1) $4,975; (2-1a) $56,050. Rosedale Foundry & Machine Co., Pittsburg, Pa., (2-1) $4,200; (2-1a) $49,780. Wheeling Mould & Foundry Co., Wheeling, W. Va., (1-1) $27,500; (1-1a) $425,000; (2-1) $5,500; (2-1a) $55,480; alternate, (1-1) $27,000; (1-1a) $414,000.

LUMBER.—Panama.—Bids were received on Oct. 31 by Capt. F. C. Boggs, Gen. Purchasing Officer, Isthmian Canal Comn., Washington, D. C., for 1,400,000 ft. B. M. of long leaf yellow pine or Douglas fir lumber, 2 × 10-in. or 2 × 12-in., various lengths, (a) delivered in five lots of 280,000 ft. each month commencing Jan. 1, 1911; (b) delivered in one lot before Jan. 1, 1911: A. S. Bacon & Sons, 2 Bay St., West, Savannah, Ga., (a) $32,900, $30,100 if delivered in 150 days; Bayshore Lumber Co., Mobile, Ala., (a) $29,302, (b) $26,586; Chicago Lumber & Coal Co., St. Louis, (a) $32,060, (b) $26,460; G. Elias & Bro., Buffalo, (a) $30,380; Georgia Pine Co., Baltimore, (a) $30,450; William D. Gill & Son, Baltimore, (a) $31,718, (b) $21.45 per M.; D. L. Gillespie & Co., Pittsburg, (a) $31,780, 90 days; Hinton Bros. Lumber Co., Lumberton, Miss., (a) $32,200; George R. Johnson, Baltimore, (a) $43,750; J. K. Joice, 164 Dearborn St., Chicago, (a) $30,100; A. G. Little Lumber Co., Richardson, Miss., (a) $30,100; S. E. Naylor & Co., Gulfport, Miss., (a) $32,200, (b) $22 per M.; Salmen Brick & Lumber Co., New Orleans, (a) $33,600; W. R. Grace & Co., 614 California St., San Francisco, (a) $28,560. Douglas fir delivered Ancon. All bids are on No. 1 common long leaf yellow pine, delivered at Colon, unless otherwise specified. Award was made to the CHICAGO LUMBER & COAL CO., St. Louis, Mo., at $26,460, entire quantity to be delivered at Colon before Jan. 1, 1911.

EXAMINATIONS.

CHEMIST IN FOREST PRODUCTS.—Washington, D. C.—The U. S. Civil Service Commission announces the postponement to Jan. 4, 1911, of the examination scheduled for Oct. 19, 1910, to secure eligibles from which to make certifications to fill four vacancies in the position of Chemist in Forest Products in the Forest Products Laboratory at Madison, Wis., at salaries ranging from $1,600 to $2,500 a year, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill the vacancies by reinstatement, transfer, or promotion.

The examination will consist of the subjects mentioned below, weighted as indicated: Organic chemistry, 15 points; Chemistry employed in industries utilizing forest products, 25 points; Thesis of not less than 1,000 words or publication on some subject bearing upon the work of the position (to be submitted with application), 20 points; Training and experience, 40 points. Applicants must have reached their 20th birthday, but not their 50th birthday. Examination form 1312.

PREPARATOR OF FOSSILS.—Washington, D. C.—The U. S. Civil Service Commission announces an examination Dec. 7, to secure eligibles from which to make certification to fill a temporary vacancy in the position of Preparator of Fossils (male), at $75 a month, in the Geological Survey, for service in Washington, D. C., for a period not to exceed six months, and other temporary or permanent positions requiring similar qualifications as they may occur in any branch of the service.

The examination will consist of the subjects mentioned below, weighted as indicated: Report writing (test in writing in letter form a report of from 150 to 200 words in length, summarizing and arranging in logical order a series of facts included in a given statement of 400 to 500 words), 15 points; practical questions, 50 points; education, training, and experience, 35 points. The duties of the position are the preparation of fossils for study by the paleontologist. It is desirable that applicants should have a fair elementary knowledge of paleontology. Applicants must have reached their 20th birthday. Examination form 1312.

CONTRACT PRICES.

TRI-BOROUGH SUBWAY.

RAPID TRANSIT RAILROAD.—New York, N. Y.—Bids were received Oct. 27 by the Public Service Commission for the construction of a subway system. This is what is popularly known as the Tri-Borough System. It includes 14 miles of four-track construction, 17 miles of three-track and 13 miles of two-track. There were three separate routes, known as: Broadway-Lexington Ave. Subway, Route No. 5; Canal St. Subway, Route No. 20; Broadway-Lafayette Ave. Subway, Route No. 9.

In the accompanying tables are given the names of the contractors and the itemized unit bids on the separate sections, to be let as single contracts.

The bidders were (the same letter being used to designate the same bidder on all contracts):

(A) Behrman & Rodgers, 48 West 35th St., New York, N. Y.; (B) Bradley Contracting Co., 1 Madison Ave., New York, N. Y.; (C) Brody & Adler, 132 Nassau St., New York, N. Y.; (D) Frederick L. Cranford, 190 Montague St., Brooklyn, N. Y.; (E) Creamer, Cranford & Donovan, 186 Remsen St., Brooklyn, N. Y.; (F) Oscar Daniels Co., 38 Park Row, New York, N. Y.; (G) Degnon Contracting Co., 60 Wall St., New York, N. Y.; (H) Walter H. Ganangan, 189 Montague St., Brooklyn, N. Y.; (I) Godwin Construction Co., 30 Church St., New York, N. Y.; (J) Haggerty-Drummond Co., 41 Park Row, New York, N. Y.; (K) James H. Holmes, 87 Nassau St., New York, N. Y.; (L) McArthur Brothers Co., 11 Pine St., New York, N. Y.; (M) Patrick McGovern, Hotel Belmont, New York, N. Y.; (N) Arthur McMullen, 149 Broadway, New York, N. Y.; (O) Metropolitan Contracting Co., Hotel Belmont, New York, N. Y.; (P) Hugh Nawn Contracting Co., Boston, Mass.; (R) Newman & Carey, 215 Montague St., Brooklyn, N. Y.; (S) O'Rourke Engineering Construction Co., 347 Fifth Ave., New York, N. Y.; (T) S. Pearson & Son, Inc., 507 Fifth Ave., New York, N. Y.; (U) Charles H. Peckworth, 415 Hudson St., New York, N. Y.; (V) Smith & Pennock Contracting Co., 71 Broadway, N. Y.; (W) Smith, Scott, Hannan & Hickey, 263 Bridge St., Brooklyn, N. Y.; (X) Henry Steers, 1 Madison Ave., New York, N. Y.

CLASSIFICATION ROUTE 5.

The following classification is used for all sections of Route 5:

Item. Classification.

1. For earth excavation, above mean high water (except excavation for sewers and pipes), including the disposal of it, etc., per cu. yd.
2. For earth excavation, below mean high water (except excavation for sewers and pipes), including the disposal of it, etc., per cu. yd.
2a. For earth excavation, both above and below mean high water, for sewers and pipes, including the disposal of it, etc., per cu. yd.
3. For rock excavation (except excavation for sewers and pipes), including the disposal of it, etc., per cu. yd.
3a. For rock excavation, for sewers and pipes, including the disposal of it, per cu. yd.
4. For underpinning buildings, including all incidental work and material, per lineal front ft. of building underpinned as follows:
    (a) For buildings less than seven stories in height, per front ft.
    (b) For buildings from seven to twelve stories in height, per front ft.
    (c) For buildings over twelve stories in height, per front ft.
5. For tunnel excavation, including disposal of material, timbering, etc., per cu. yd.
5a. For tunnel excavation, for sewers and pipes, including the disposal of the material, timber, etc., per cu. yd.
6. For concrete masonry, in place, per cu. yd.
7. For protective concrete masonry in place outside of waterproofing, per cu. yd.
8. For rubble stone masonry, in place, per cu. yd.
9. For brick masonry, in place, per cu. yd.
10. For hollow terra cotta brick masonry, in place, per cu. yd.
12. For timber piles, in place, and prepared, per lin. ft.
13. For timber foundations, placed and fastened, per M. ft. B. M.
14. For broken stone or gravel, in place, other than that used in concrete, per cu. yd.
15. For waterproofing, treated woven fabric, laid with pitch or asphaltum, in place, as follows:
    (a) For 1-ply, per sq. yd.
    (b) For 2-ply, per sq. yd.
    (c) For 3-ply, per sq. yd.
    (d) For 4-ply, per sq. yd.
    (e) For 5-ply, per sq. yd.
    (f) For 6-ply, per sq. yd.
16. For waterproofing, brick laid in asphalt, mastic, in place, per cu. yd.
17. For vitrified or cast-iron drain pipe in place, as follows:
    (a) For 12-inch vitrified pipe, per lin. ft.
    (b) For 10-inch vitrified pipe, per lin. ft.
    (c) For 8-inch vitrified pipe, per lin. ft.
    (d) For 6-inch vitrified pipe, per lin. ft.
    (e) For 4-inch vitrified pipe, per lin. ft.
    (f) For 8-inch cast-iron pipe, per lin. ft.
    (g) For 6-inch cast-iron pipe, per lin. ft.
    (h) For 4-inch cast-iron pipe, per lin. ft.
18. For tunnel ducts, in place, per duct ft.
19. For riveted steel, painted and erected, per ton of 2,000 lbs.
20. For steel beams and shapes with connections, painted and erected, per ton of 2,000 lbs.
21. For steel rods and bars built in concrete, per ton of 2,000 lbs.
22. For cast-iron tunnel lining, in place in the work, including the placing of bolts and washers and caulking of joints, etc., per ton of 2,000 lbs.
23. For steel bolts and washers for tunnel lining, per ton of 2,000 lbs.
24. For cast-iron columns erected and painted, per ton of 2,000 lbs.
25. For miscellaneous iron castings, other than tunnel lining, such as manhole heads and covers, gratings, etc.; but not including castings for sewer work or pipes; in place, per ton of 2,000 lbs.
26. For wire mesh, in place, per lb.
27. For 1½-in. galvanized iron pipe hand rail, in place, including expansion bolts, etc., per lin. ft.
28. For steel gratings for ventilation, in place, including frames, etc, per sq. ft.
29. For vault lights, in place, per sq. ft.
30. For street surface restored:
    (a) Sidewalks, including curbs and all structures and growths therein or thereon, per sq. yd.
    (b) For temporary repavement and maintenance of roadways, per sq. yd.
31. For park surface restored (all classes), per sq. yd.
32. For wrought-iron or fiber electric conduits in place in stations, as follows:
    (a) For ¾-in. wrought-iron, per lin. ft.
    (b) For 1½-in. wrought-iron, per lin. ft.
    (c) For 2-in. wrought-iron, per lin. ft.
    (d) For 2-in. fiber, per lin. ft.
33. For c.-i. outlet boxes in place in stations, each.
34. For 6-in. c.-i. pipe and fittings, including specials ("extra heavy"), in place in stations, per lin. ft.
35. For tube tunnel under Harlem River, per lin. ft. of four-track tube.
36. For tube tunnel under Harlem River, per lin. ft. of four-track tube.
37. For 12-in. vitrified pipe sewer, per lin. ft.
38. For 15-in. vitrified pipe sewer, per lin. ft.
39. For 18-in. vitrified pipe sewer, per lin. ft.
40. For 20-in. vitrified pipe sewer, per lin. ft.
41. For 24-in. vitrified pipe sewer, per lin. ft.
42. For c.-i. sewer pipe (straight pipe), in place in the work, per ton of 2,000 lbs.
43. For c.-i. sewer pipe (special casting), in place in the work, per ton of 2,000 lbs.

Egg-Shaped Brick or Concrete Sewers.

44. For 3 ft. × 2 ft. per lin. ft.
45. For 3 ft. 6 in. × 2 ft. 4 in. per lin. ft.
46. For 3 ft. 9 in. × 2 ft. 6 in. per lin. ft.
47. For 4 ft. × 2 ft. 8 in. per lin. ft.
48. For 4 ft. 3 in. × 2 ft. 10 in. per lin. ft.
49. For 4 ft. 6 in. × 3 ft. per lin. ft.
50. For 4 ft. 9 in. × 3 ft. 2 in. per lin. ft.
51. For 5 ft. 2 in. × 3 ft. 5 in. per lin. ft.
52. For 3 ft. 9 in. per lin. ft.
53. For 4 ft. per lin. ft.
54. For 4 ft. 3 in. per lin. ft.
55. For 4 ft. 9 in. per lin. ft.
56. For 5 ft. per lin. ft.
57. For 5 ft. 6 in. per lin. ft.
58. For 5 ft. 6 in. in tunnel, per lin. ft.
59. For 5 ft. 9 in. per lin. ft.
60. For 6 ft. per lin. ft.
61. For 8 ft. per lin. ft.
62. For 6 ft. 6 in. per lin. ft.
63. For 7 ft. per lin. ft.
64. ——
65. For 8 ft. 9 in. per lin. ft.
66. For 9 ft. 6 in. per lin. ft.
67. ——
68. ——
69. ——
70. For 7 ft. × 12 ft. per lin. ft.
71. For triple section, per lin. ft.
72. For 4 ft. wooden barrel, per lin. ft.
73. For 6-in. centrifugal pump and motor and appurtenances in place complete, capacity 1,000 gals. per min. against 20 ft. head, power, 550 volts D. C., each.
74. For 8-in. centrifugal pump and motor and appurtenances in place complete, capacity, each.

Surface and Sub-Surface Structures.

75. For street surface railroad including the support, reconstruction rebuilding, etc., where necessary (but not including permanent masonry supports, if required and added, and not including additional vaults, if required and constructed in excess of the number existing), as follows:
    (a) For electric railroads, per lin. ft. of single track.
    (b) For horse railroads, per lin. ft. of single track.
76. For the temporary and permanent support and maintenance of elevated railroad structures, and all work incidental thereto, per column.
77. ——
78. For 4-in. water pipe, per lin. ft.
79. For 6in. water pipe, per lin. ft.
80. For 8-in. water pipe per lin. ft.
81. For 10-in. water pipe, per lin. ft.
82. For 12-in. water pipe, per lin. ft.
83. For 16-in. water pipe, per lin. ft.
84. For 20-in. water pipe, per lin. ft.
85. For 24-in. water pipe, per lin. ft.
86. For 30-in. water pipe, per lin. ft.
87. For 36-in. water pipe, per lin. ft.
88. For 48-in. water pipe, per lin. ft.

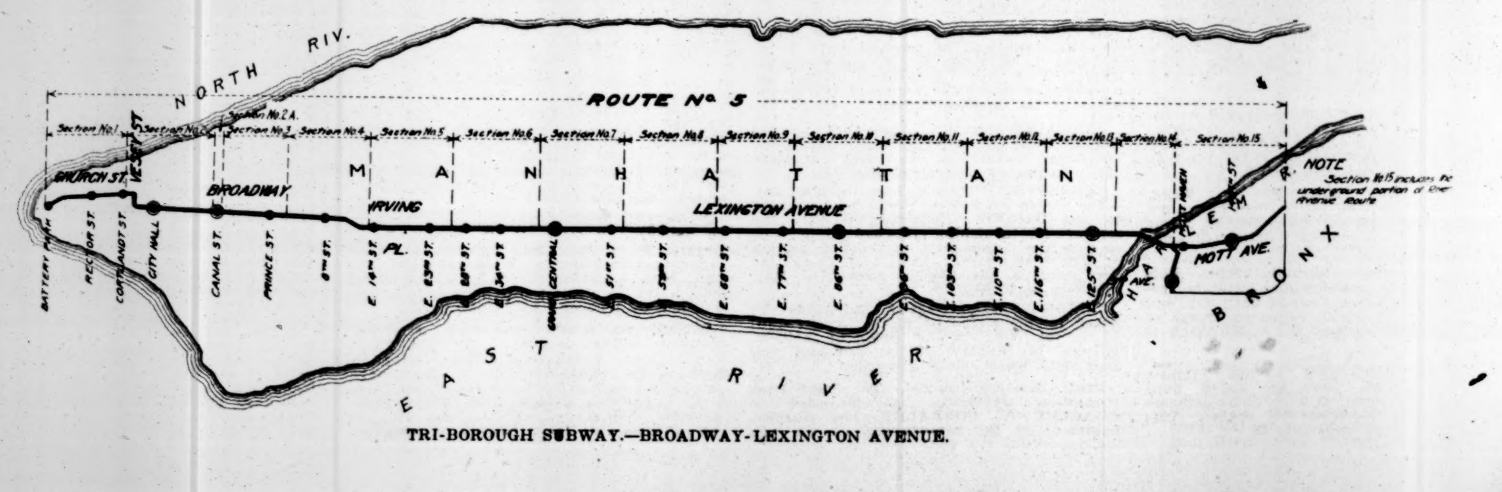
(Continued on page 215.)

BROADWAY-LEXINGTON AVENUE—ROUTE 5—SECTION 15.

Classification Items.	Estimated Quantities.	B	I	J	P
1	106,630 cu. yds.	$3.00	$4.50	$2.90	$3.50
2	71,900 cu. yds.	4.00	4.50	3.75	6.25
2a	16,900 cu. yds.	4.00	4.50	2.90	2.25
3	265,000 cu. yds.	4.00	4.50	4.00	4.25
3a	900 cu. yds.	6.00	4.50	5.00	4.25
4a	1,200 ft.	100.00	20.00	100.00	100.00
b	0 ft.	..	50.00	..	140.00
c	0 ft.	..	50.00	..	180.00
5	10,460 cu. yds.	8.00	10.00	9.00	8.00
6	78,000 cu. yds.	10.00	9.00	8.50	10.00
7	5,060 cu. yds.	8.00	8.00	8.15	8.00
8	360 cu. yds.	8.00	4.00	5.00	8.00
9	100 cu. yds.	15.00	12.00	12.50	14.00
10	3,200 cu. yds.	15.00	12.00	11.00	14.00
11	500 Bbls.	4.50	2.50	6.25	5.00
12	1,000 lin. ft.	1.25	.50	.50	2.00
13	2M ft. B. M.	75.00	60.00	62.50	80.00
14	5,400 cu. yds.	2.50	1.50	1.90	3.00
15a	37,400 sq. yds.	.75	.50	.35	.75
b	100 sq. yds.	1.00	.90	.60	.90
c	8,150 sq. yds.	1.50	1.25	.70	1.10
d	100 sq. yds.	1.75	1.50	1.15	1.40
e	100 sq. yds.	2.00	2.00	1.40	1.50
f	100 sq. yls.	2.50	2.50	1.70	1.75
16	6,100 cu. yds.	30.00	20.00	25.00	20.00
17a	210 lin. ft.	1.75	.80	.75	1.40
b	100 lin. ft.	1.50	.60	.65	1.15
c	7,060 lin. ft.	1.25	.40	.50	.75
d	100 lin. ft.	1.00	.30	.45	.50
e	100 lin. ft.	.75	.20	.40	.35
f	0 lin. ft.	..	1.70	..	1.60
g	100 lin. ft.	1.50	1.25	1.15	1.20
h	12,400 lin. ft.	1.00	.80	.65	.80
18	508,000 duct ft.	.15	.12	.10½	.10
19	5,060 tons	90.00	73.00	85.00	85.00
20	3,130 tons	80.00	63.00	65.00	75.00
21	2,050 tons	65.00	58.00	67.50	70.00
25	32 tons	75.00	60.00	87.50	70.00
26	25,660 lbs.	.10	.04	.10	.08
27	11,440 lin. ft.	1.25	.50	.45	1.00
28	8,130 sq. ft.	2.50	.80	3.15	2.00
29	8,700 sq. ft.	2.00	1.10	2.25	2.00
30a	11,800 sq. yds.	3.00	1.35	1.15	1.25
b	28,800 sq. yds.	3.00	2.50	.90	2.25
31	3,180 sq. yds.	2.00	1.35	.50	1.00
32a	25,000 lin. ft.	.30	.10	.10	.10
b	650 lin. ft.	.45	.20	.20	.15
c	325 lin. ft.	.60	.30	.25	.18
d	4,320 lin. ft.	.15	.30	.20	.08
33	820 boxes	1.00	4.00	1.25	1.50
34	200 lin. ft.	2.50	2.00	1.60	1.25
37	2,900 lin. ft.	5.00	4.00	2.40	4.50
38	2,564 lin. ft.	6.00	5.00	2.75	5.00
39	1,132 lin. ft.	..	..	..	..
40	400 lin. ft.	..	..	..	..
41	102 lin. ft.	10.00	6.00	5.00	7.00
42	30 tons	50.00	65.00	40.00	40.00
45	960 lin. ft.	15.00	12.00	6.25	8.00
56	430 lin. ft.	20.00	20.00	10.65	10.00
70	320 lin. ft.	60.00	35.00	21.25	25.00
75a	4,730 lin. ft.	10.00	10.00	.65	20.00
b	0 lin. ft.	..	10.00	..	10.00
76	8 columns	1,000 00	10.00	250.00	800.00
78	100 lin. ft.	1.25	.50	.35	.50
79	1,550 lin. ft.	1.50	1.00	.40	.60
82	1,350 lin. ft.	2.00	2.00	.75	.90
91	210 lin. ft.	1.25	1.00	.40	.60
92	1,300 lin. ft.	1.50	1.00	.65	.70
94	180 lin. ft.	2 00	2.00	.75	.80
95	540 lin. ft.	2.25	2.00	.90	1.25
96	540 lin. ft.	2.50	2.00	1.00	1.50
97	760 lin. ft.	3.00	3.00	1.25	2.00
100	60 tons	40.00	50.00	28.75	38.00
101	15 tons	70.00	60.00	75.00	75.00
127	1,600 duct. ft.	.25	.17	.40	.10
Totals		$4,336,925	$4,154,360	*$3,820,129	$4,414,642

*Lowest Bidder.

GRAND TOTAL (LOWEST BIDDERS), ROUTE 5, SECTIONS 1 TO 15, INC., $59,746,656.



TRI-BOROUGH SUBWAY.—BROADWAY-LEXINGTON AVENUE.

BROADWAY-LEXINGTON AVENUE—ROUTE 5—SECTION 2A.

Classification Items.	Estimated Quantities.	B	D	L
1	28,070 cu. yds.	$7.50	$9.70	$15.00
2	59,370 cu. yds.	20.00	29.70	50.00
3	100 cu. yds.	5.75	10.00	10.00
4a	318 ft.	350.00	300.00	200.00
b	70 ft	400.00	800.00	400.00
c	0 ft.	.....	1,000.00	1,000.00
6	18,180 cu. yds.	10.00	10.30	12.00
7	2,625 cu. yds.	8.00	9.00	10.00
8	500 cu. yds.	8.00	8.00	9.50
9	230 cu. yds.	15.00	18.00	17.00
10	105 cu. yds.	15.00	12.00	17.00
12	1,000 lin. ft.	1.25	5.00	1.50
13	2M. ft. B. M.	75.00	100.00	75.00
14	1,070 cu. yds.	2.50	2.75	3.00
15a	20,625 sq. yds.	.75	1.50	1.00
b	100 sq. yds.	1.25	2.10	1.25
c	1,255 sq. yds.	1.75	2.50	1.60
d	100 sq. yds.	2.00	2.90	2.00
e	100 sq. yds.	2.50	3.30	2.50
f	120 sq. yds.	3.00	3.70	3.00
16	3,255 cu. yds.	35.00	55.00	35.00
17a	100 lin. ft.	1.75	1.05	1.50
b	100 lin. ft.	1.50	.91	1.30
c	800 lin. ft.	1.25	.63	.80
d	200 lin. ft.	1.00	.38	.50
e	100 lin. ft.	.75	.29	.40
f	0 lin. ft.	.....	1.20	.....
g	100 lin. ft.	1.50	.89	1.50
h	625 lin. ft.	1.00	.55	.85
18	45,025 duct ft.	.15	.15	.15
19	2,275 tons	90.00	95.00	120.00
20	1,945 tons	80.00	80.00	110.00
21	23 tons	65.00	75.00	80.00
25	10 tons	75.00	80.00	70.00
26	4,100 lbs.	.10	.21	.06
28	900 sq. ft.	2.50	2.60	2.00
29	2.025 sq. ft.	2.00	2.27	2.15
30a	2,442 sq. yds.	3.00	3.00	2.50
b	2,798 sq. yds.	3.00	3.00	2.00
32a	9,640 lin. ft.	.30	.25	.12
b	520 lin. ft.	.45	.31	.22
c	260 lin. ft.	.60	.45	.30
d	2,160 lin. ft.	.15	.45	.15
33	578 boxes	1.00	1.20	1.00
34	770 lin. ft.	2.50	1.16	1.40
45	190 lin. ft.	.....	.....	.....
47	230 lin. ft.	.....	.....	.....
54	42 lin. ft.	.....	.....	.....
55	208 lin. ft.	.....	.....	.....
57	68 lin. ft.	.....	.....	.....
75a	1,280 lin. ft.	20.00	22.00	20.00
b	100 lin. ft.	5.00	5.00	10.00
78	100 lin. ft.	1.25	.50	.55
82	500 lin. ft.	2.00	1.00	1.10
86	400 lin. ft.	4.00	2.00	3.50
91	960 lin. ft.	1.25	.65	.60
100	21 tons	40.00	30.00	37.00
101	6 tons	70.00	80.00	77.00
102	100 lin. ft.	2.50	2.00	2.50
103	490 lin. ft.	3.00	2.25	3.00
104	150 lin. ft.	4.00	2.75	4.00
107	12 tons	35.00	30.00	37.00
108	4 tons	70.00	80.00	77.00
127	11,000 duct ft.	.25	1.00	.30
Totals		*$2,323,542	$3,086,908	$4,435,564

*Lowest Bidder.

BROADWAY-LEXINGTON AVENUE—ROUTE 5—SECTION 1.

Classification Items.	Estimated Quantities.	B	G	L	S
1	160,000 cu. yds.	$7.50	$8.00	$5.75	$4.50
2	143,000 cu. yds.	12.00	16.00	6.00	7.50
2a	9,000 cu. yds.	5.00	7.00	4.00	5.00
3	61,000 cu. yds.	5.50	10.00	7.50	6.00
4a	3,000 ft.	250.00	300.00	165.00	150.00
b	400 ft.	300.00	550.00	310.00	300.00
c	300 ft.	400.00	800.00	800.00	600.00
6	70,500 cu. yds.	9.00	13.00	10.25	12.00
7	10,300 cu. yds.	8.00	7.50	8.50	12.00
8	2,300 cu. yds.	8.00	6.00	8.50	10.00
9	100 cu. yds.	15.00	15.00	15.00	16.00
10	770 cu. yds.	15.00	13.00	15.00	16.00
12	5,000 lin. ft.	1.25	1.00	1.25	1.50
13	2 M. ft. B. M.	75.00	80.00	65.00	100.00
14	3,200 cu. yds.	2.50	2.50	3.00	3.00
15a	80,000 sq. yds.	.75	.40	.80	.80
b	100 sq. yds.	1.00	.67	1.10	1.00
c	4,000 sq. yds.	1.50	1.00	1.45	1.25
d	100 sq. yds.	1.75	1.35	1.75	1.75
e	100 sq. yds.	2.00	1.60	2.10	2.00
f	100 sq. yds.	2.50	2.00	2.35	2.50
16	12,200 cu. yds.	30.00	40.60	30.00	32.00
17a	100 lin. ft.	1.75	1.20	1.50	1.75
b	100 lin. ft.	1.50	.85	1.30	1.50
c	2,430 lin. ft.	1.25	.50	.80	1.00
d	200 lin. ft.	1.00	.40	.50	.60
e	100 lin. ft.	.75	.30	.40	.50
f	0 lin. ft.	.....	....	2.00	....
g	100 lin. ft.	1.50	1.30	1.50	1.50
h	1,800 lin. ft.	1.00	1.00	.85	1.00
18	238,000 duct ft.	.15	.12	.15	.15
19	5,500 tons	90.00	95.00	110.00	95.00
20	4,400 tons	80.00	75.00	100.00	85.00
21	660 tons	65.00	75.00	80.00	80.00
25	10 tons	75.00	100.00	70.00	65.00
26	10,600 lbs.	.10	.15	.06	.06
27	100 lin. ft.	1.25	.40	1.00	1.00
28	9,000 sq. ft.	2.50	1.50	2.00	2.25
29	4,500 sq. ft.	2.00	2.25	2.15	2.25
30a	7,140 sq. yds.	3.00	4.00	2.50	3.00
b	14,520 sq. yds.	3.00	2.50	1.50	2.50
31	20,800 sq. yds.	2.00	2.60	1.50	2.00
32a	18,900 lin. ft.	.30	.15	.12	.15
b	3,230 lin. ft.	.45	.30	.22	.25
c	1,730 lin. ft.	.60	.22	.15	.15
d	6,600 lin. ft.	.15	.45	.30	.30
33	1,030 boxes	1.00	.90	1.00	1.75
34	140 lin. ft.	2.50	1.50	1.40	1.50
38	1,250 lin. ft.	6.00	5.00	3.50	6.00
39	720 lin. ft.	7.00	6.50	4.00	7.00
45	2,168 lin. ft.	15.00	12.00	7.50	10.00
47	452 lin. ft.	16.00	14.00	8.25	11.00
75a	5,500 lin. ft.	18.00	15.00	12.00	20.00
b	240 lin. ft.	5.00	2.00	5.00	7.50
76	120 columns	2,000.00	1,500.00	800.00	1,000.00
78	100 lin. ft.	1.25	4.00	.55	.75
79	760 lin. ft.	1.50	5.00	.65	1.00
82	730 lin. ft.	2.00	7.50	1.10	2.00
84	680 lin. ft.	3.00	10.00	2.00	3.50
90	280 lin. ft.	1.00	4.00	.55	.70
91	610 lin. ft.	1.25	5.00	.60	.80
96	90 lin. ft.	2.50	10.00	2.00	5.00
100	25 tons	40.00	30.00	37.50	40.00
101	6 tons	70.00	80.00	77.00	75.00
110	30 lin. ft.	2.00	50.00	1.25	1.25
113	830 lin. ft.	3.00	90.00	3.75	7.50
116	30 lin. ft.	2.00	5.00	1.25	1.35
119	200 lin. ft.	3.00	10.00	3.75	8.00
127	45,900 duct ft.	.25	1.00	.30	.25
Totals		$6,978,338	$8,697,447	$5,881,946	*$5,863,194

*Lowest Bidder.

BROADWAY-LEXINGTON AVENUE—ROUTE 5—SECTION 2.

Classification Items.	Estimated Quantities.	B	D	L	S
1	256,100 cu. yds.	$7.50	$6.70	$5.75	$5.90
2	142,300 cu. yds.	12.00	15.79	7.50	9.00
2a	3,500 cu. yds.	5.00	4.00	4.00	6.00
3	100 cu. yds.	5.50	10.00	10.00	5.00
4a	3,000 ft.	250.00	300.00	165.00	150.00
b	1,300 ft.	300.00	500.00	310.00	300.00
c	750 ft.	400.00	1,000.00	800.00	600.00
5	23,300 cu. yds.	40.00	27.50	20.00	15.00
6	84,800 cu. yds.	10.00	9.43	11.00	12.00
7	6,220 cu. yds.	8.00	9.00	8.50	12.00
8	3,250 cu. yds.	8.00	8.00	8.50	10.00
9	50 cu. yds.	15.00	18.00	15.00	16.00
10	2,360 cu. yds.	15.00	12.00	15.00	16.00
11	4,000 Bbls.	4.50	3.30	4.00	4.00
12	1,000 lin. ft.	1.25	5.00	1.25	1.50
13	2 M. ft. B. M.	75.00	75.00	65.00	100.00
14	3,300 cu. yds.	2.50	2.75	3.00	3.00
15a	45,500 sq. yds.	.75	1.00	.80	.80
b	100 sq. yds.	1.00	1.60	1.10	1.00
c	5,300 sq. yds	1.50	2.00	1.45	1.25
d	100 sq. yds.	1.75	2.40	1.75	1.75
e	100 sq. yds.	2.00	2.80	2.10	2.00
f	100 sq. yds.	2.50	3.20	2.35	2.50
16	7,300 cu. yds.	30.00	40.00	30.00	32.00
17a	100 lin. ft.	1.75	1.05	1.50	1.75
b	100 lin. ft.	1.50	.91	1.30	1.50
c	210 lin. ft.	1.25	.63	.80	1.00
d	100 lin. ft.	1.00	.38	.50	.60
e	100 lin. ft.	.75	.29	.40	.50
f	0 lin. ft.	..	1.20	2.00	..
g	100 lin. ft.	1.50	.89	1.50	1.50
h	1,600 lin. ft.	1.00	.55	.85	1.00
18	365,400 duct ft.	.15	.12	.15	.15
19	6,700 tons	90.00	85.50	110.00	100.00
20	3,850 tons	80.00	73.50	100.00	85.00
21	1,240 tons	65.00	56.00	80.00	80.00
22	5,300 tons	80.00	70.00	60.00	70.00
23	75 tons	100.00	100.00	85.00	100.00
25	20 tons	75.00	80.00	70.00	65.00
26	13,620 lbs.	.10	.21	.06	.06
27	9,130 lin. ft.	1.25	.50	1.00	1.00
28	10,310 sq. ft.	2.50	2.60	2.00	2.25
29	2,900 sq. ft.	2.00	2.29	2.15	2.25
30a	8,065 sq. yds.	3.00	3.25	2.50	3.00
b	18,695 sq. yds.	3.00	3.25	1.50	2.50
31	1,300 sq. yds.	2.00	3.25	2.50	2.00
32a	31,300 lin. ft.	.30	.25	.12	.15
b	1,550 lin. ft.	.45	.31	.22	.25
c	830 lin. ft.	.60	.45	.30	.30
d	4,400 lin. ft.	.15	.45	.15	.15
33	1,160 boxes	1.00	1.20	1.00	1.75
34	380 lin. ft.	2.50	1.16	1.40	1.50
38	1,760 lin. ft.	6.00	3.30	3.50	6.00
42	9 tons	50.00	57.00	50.00	50.00
45	185 lin. ft.	15.00	7.00	7.50	10.00
47	95 lin. ft.	..	..	..	..
75a	6,750 lin. ft.	18.00	22.00	12.00	20.00
b	770 lin. ft.	5.00	5.00	5.00	7.50
76	6 columns	2,000.00	750.00	800.00	1,000.00
78	100 lin. ft.	1.25	.50	.55	.75
82	500 lin. ft.	2.00	1.00	1.10	2.00
85	1,200 lin. ft.	3.50	1.75	2.50	3.50
94	500 lin. ft.	2.00	1.00	1.05	2.00
95	500 lin. ft.	2.25	1.50	1.50	3.50
96	500 lin. ft.	2.50	1.75	2.00	5.00
100	50 tons	40.00	30.00	37.50	40.00
101	13 tons	70.00	80.00	77.00	75.00
102	100 lin. ft.	2.50	2.00	2.00	1.60
103	200 lin. ft.	3.00	2.25	2.40	3.00
104	180 lin. ft.	4.00	2.35	3.50	4.25
106	120 lin. ft.	5.00	2.75	5.00	7.00
107	15 tons	35.00	30.00	37.50	40.00
108	5 tons	70.00	80.00	77.00	75.00
110	500 lin. ft.	2.00	1.00	1.25	1.25
116	100 lin. ft.	2.00	1.30	1.25	1.35
127	31,000 duct ft.	.25	1.00	.30	.25
Totals		$9,065,007	$9,906,668	*$7,677,464	$7,761,173

*Lowest Bidder.

BROADWAY-LEXINGTON AVENUE—ROUTE 5—SECTION 14, TYPE K.

Classification Items.	Estimated Quantities.	B	L	N	S
1	49,510 cu. yds.	$3.50	$5.00	$3.75	$4.50
2	156,100 cu. yds.	7.00	7.50	5.50	8.50
2a	1,565 cu. yds	5.00	4.00	6.00	5.00
3	27,620 cu. yds.	6.00	7.50	8.00	7.00
4a	850 ft.	150.00	130.00	40.00	125.00
b	0 ft.	..	300.00	70.00	..
c	0 ft.	..	700.00	100.00	..
6	39,000 cu. yds.	10.00	10.00	13.00	12.00
7	5,130 cu. yds.	8.00	8.50	12.00	12.00
8	1,370 cu. yds	8.00	8.50	8.00	10.00
9	100 cu. yds.	15.00	15.00	18.00	16.00
10	100 cu. yds.	15.00	15.00	18.00	16.00
12	10,000 lin. ft.	2.00	1.50	1.25	1.50
13	2M ft. B. M.	75.00	65.00	100.00	100.00
15a	45,000 sq. yds.	1.00	.80	.50	.80
b	100 sq. yds.	1.25	1.10	.75	1.00
c	300 sq. yds.	1.75	1.45	1.00	1.25
d	100 sq. yds.	2.00	1.75	1.25	1.75
e	100 sq. yds.	2.50	2.10	1.50	2.00
f	100 sq. yds.	3.00	2.35	1.75	2.50
16	7,420 cu. yds.	35.00	30.00	16.00	32.00
17a	100 lin. ft.	1.75	1.50	1.00	1.75
b	100 lin. ft.	1.50	1.30	.80	1.50
c	100 lin. ft.	1.25	.80	.65	1.00
d	100 lin. ft.	1.00	.50	.50	.60
e	100 lin. ft.	.75	.40	.40	.50
f	100 lin. ft.	1.75	2.00	1.50	2.00
g	100 lin. ft.	1.50	1.50	1.10	1.50
h	100 lin. ft.	1.00	.85	.90	1.00
18	180,420 duct ft.	.15	.15	.15	.15
19	6,620 tons	90.00	110.00	80.00	95.00
20	580 tons	80.00	100.00	70.00	85.00
21	550 tons	65.00	80.00	80.00	80.00
25	12 tons	75.00	70.00	75.00	65.00
26	17,380 lbs.	.10	.06	.06	.06
27	5,460 lin. ft.	1.25	1.00	.50	1.00
28	1,560 sq. ft.	2.50	2.00	1.75	2.25
29	100 sq. ft.	2.00	2.15	3.00	2.25
30a	3,500 sq. yds.	3.00	2.50	1.50	3.00
b	7,355 sq. yds.	3.00	1.50	1.00	2.50
36	1,080 lin. ft.	3,000.00	2,000.00	1,925.00	2,400.00
39	290 lin. ft.	7.00	4.00	4.50	7.00
45	50 lin. ft.	15.00	7.50	20.00	10.00
47	60 lin. ft.	..	..	..	..
70	985 lin. ft.	..	..	..	..
75a	1,550 lin. ft.	18.00	12.00	20.00	20.00
b	0 lin. ft.	..	5.00	20.00	..
78	100 lin. ft.	1.25	.55	1.00	.75
79	100 lin. ft.	1.50	.65	1.25	1.00
82	100 lin. ft.	2.00	1.10	2.50	2.00
100	1 ton	40.00	37.00	50.00	40.00
127	2,000 duct. ft.	.25	.30	1.00	.25
Totals		$6,362,166	$5,534,965*	$4,823,513	$6,109,858

*Lowest Bidder.

BROADWAY-LEXINGTON AVENUE—ROUTE 5—SECTION 6.

Classification Items.	Estimated Quantities.	B	G	L
1	73,000 cu. yds	$3.50	$6.25	$6.00
2	500 cu. yds	7.50	6.25	8.00
2a	37,000 cu. yds	5.00	6.25	4.00
3	116,200 cu. yds	5.00	8.70	7.70
3a	27,000 cu. yds	6.00	8.70	6.00
4a	340 ft.	150.00	110.00	150.00
b	30 ft.	200 00	285.00	300.00
c	0 ft.	......	......	700.00
5	85,000 cu. yds	9.00	9.25	12.00
5a	2,810 cu. yds	20.00	18.00	16.00
6	42,300 cu. yds	10.00	14.00	11.00
7	370 cu. yds	8.00	8.00	8.50
8	1,700 cu. yds	8.00	6.00	8.50
9	1,610 cu. yds	15.00	16.00	18.00
10	880 cu. yds	15.00	14.00	15.00
11	2,500 bbls.	4.50	3.75	4.00
13	2 M. ft. B. M.	75.00	75.00	65.00
14	3,100 cu. yds	2.50	2.50	3.00
15a	4,810 sq. yds	.75	.40	.80
b	100 sq. yds	1.00	.67	1.10
c	6,300 sq. yds	1.50	1.00	1.45
d	100 sq. yds	1.75	1.35	1.75
e	100 sq. yds	2.00	1.60	2.10
f	100 sq. yds	2.50	2.00	2.35
16	650 cu. yds	30.00	40.00	30.00
17a	100 lin. ft	1.75	1.20	1.50
b	100 lin. ft	1.50	.85	1.30
c	5,100 lin. ft	1.25	.50	.80
d	200 lin. ft	1.00	.40	.50
e	100 lin. ft	.75	.30	.40
f	0 lin. ft	......	......	2.00
g	100 lin. ft	1.50	1.50	1.50
h	8,200 lin. ft	1.00	1.20	.85
18	555,000 duct ft	.15	.12	.15
19	1,770 tons	90.00	90.00	110.00
20	2,710 tons	80.00	80.00	100.00
21	610 tons	65.00	80.00	80.00
24	60 tons	75.00	90.00	60.00
25	15 tons	75.00	100.00	70.00
26	8,200 lbs.	.10	.16	.06
27	12,900 lin. ft	1.25	.50	1.00
28	10,100 sq. ft	2.50	1.50	2.00
29	6,400 sq. ft	2.00	2.25	2.15
30a	3,170 sq. yds	3.00	4.00	2.50
b	19,630 sq. yds	3.00	2.50	1.50
32a	12,000 lin. ft	.30	.16	.12
b	900 lin ft	.45	.35	.22
c	460 lin. ft	.60	.50	.30
d	4,400 lin. ft	.15	.25	.15
33	640 boxes	1.00	.90	1.00
34	60 lin. ft	2.50	1.50	1.40
38	720 lin. ft	6.00	5.50	3.50
39	1,055 lin. ft	7.00	6.50	4.00
42	9 tons	50.00	30.00	50.00
45	390 lin. ft	15.00	12.00	7.50
47	60 lin. ft	......	......	......
57	1,080 lin. ft	22.00	19.00	13.00
58	1,280 lin. ft	40.00	20.00	19.00
60	1,160 lin. ft	25.00	21.00	14.00
64	420 lin. ft	35.00	36.00	23.00
66	1,935 lin. ft	40.00	42.00	31.00
71	102 lin. ft	100.00	50.00	35.00
72	336 lin. ft	75.00	15.00	10.00
75a	5,800 lin. ft	18.00	15.00	12.00
b	270 lin. ft	5.00	2.00	5.00
78	100 lin. ft	1.25	1.20	.55
79	1,230 lin. ft	1.50	2.00	.65
90	160 lin. ft	1.00	1.20	.55
91	830 lin. ft	1.25	2.00	.60
92	880 lin. ft	1.50	2.90	.75
94	1,000 lin. ft	2.00	3.30	1.05
95	110 lin. ft	2.25	3.60	1.50
96	230 lin. ft	2.50	4.00	2.00
100	27 tons	40.00	30.00	37.00
101	7 tons	70.00	80.00	77.00
122	250 lin. ft	2.00	1.50	1.00
127	103,000 duct ft	.25	.20	.30
Totals		*$3,634,213	$4,443,561	$4,300,023

*Lowest Bidder.

BROADWAY-LEXINGTON AVENUE—ROUTE 5—SECTION 14, TYPE H.

Classification Items.	Estimated Quantities.	B	L	T	S
1	47,970 cu. yds.	$3.50	$5.00	Lump Sum Bid of $8,500,000, on modified plans of bidder.	$4.50
2	156,650 cu. yds.	7.00	7.50		8.50
2a	1,565 cu. yds.	5.00	4.00		5.00
3	24,480 cu. yds.	6.00	7.50		7.00
4a	850 ft.	150.00	130.00		125 00
b	0 ft.	..	300.00		....
c	0 ft.	..	700.00		....
6	38,600 cu. yds.	10.00	10.00		12.00
7	5,140 cu. yds.	8.00	8.50		12.00
8	1,370 cu. yds.	8.00	8.50		10.00
9	100 cu. yds.	15.00	15.00		16.00
10	100 cu. yds.	15.00	15.00		16.00
12	10,000 lin. ft.	2.00	1.50		1.50
13	2M ft. B. M.	75.00	65.00		100.00
15a	44,830 sq. yds.	1.00	.80		.80
b	100 sq. yds.	1.25	1.10		1.00
c	310 sq. yds.	1.75	1.45		1.25
d	100 sq. yds.	2.00	1.75		1.75
e	100 sq. yds.	2.50	2.10		2.00
f	100 sq. yds.	3.00	2.35		2.50
16	7,380 cu. yds.	35.00	30.00		32.00
17a	100 lin. ft.	1.75	1.50		1.75
b	100 lin. ft.	1.30	1.30		1.50
c	100 lin. ft.	1.25	.80		1.00
d	100 lin. ft.	1.00	.50		.60
e	100 lin. ft.	.75	.40		.50
f	100 lin. ft.	1.75	2.00		2.00
g	100 lin. ft.	1.50	1.50		1.50
h	100 lin. ft.	1.00	.85		1.00
18	179,000 duct ft.	.15	.15		.15
19	62 tons	90.00	110.00		95.00
20	690 tons	80.00	100.00		85.00
21	550 tons	65.00	80 00		80.00
25	12 tons	75.00	70.00		65.00
26	16,340 lbs.	.10	.06		.06
27	5,330 lin. ft.	1.35	1.00		1.00
28	1,560 sq. ft.	2.50	2.00		2.25
29	100 sq. ft.	2 00	2.15		2.25
30a	3,500 sq. yds.	3.00	2.50		3.00
b	7,095 sq. yds.	3.00	1.50		2.50
35	1,110 lin. ft.	3,000.00	2,200.00		2,400.00
39	290 lin. ft.	7.00	4.00		7.00
45	50 lin. ft.	15.00	7.50		10.00
47	60 lin. ft.	....	.....		.....
70	985 lin. ft.	....	.....		.....
75a	1,550 lin. ft.	18.00	12.00		20.00
b	0 lin. ft.	....	5.00		.....
78	100 lin. ft.	1 25	.55		.75
79	100 lin. ft.	1.50	.65		1.00
82	100 lin. ft.	2.00	1.10		2.00
100	1 ton	40.00	37.00		40.00
127	2,000 duct ft.	.25	.30		.25
Totals		$6,396,054	*$5,748,608	$8,500,000	$6,119,934

*Lowest Bidder

BROADWAY-LEXINGTON AVENUE—ROUTE 5—SECTION 3.

Classification Items.	Estimated Quantities.	B	D	L
1	172,000 cu. yds	$4.00	$5.98	$5.75
2	40,500 cu. yds	7.50	13.95	6.00
2a	10,400 cu. yds	5.00	4.00	4.00
4a	3,700 ft.	200.00	150.00	165.00
b	1,700 ft.	300.00	300.00	310.00
c	0 ft.	......	1,000.00	800.00
6	42,300 cu. yds	10.00	9.08	11.50
7	2,200 cu. yds	8.00	7.00	8.50
8	2,300 cu. yds	8.00	8.00	8.50
9	50 cu. yds	15.00	16.00	15.00
10	1,230 cu. yds	15.00	12.00	15.00
12	1,000 lin. ft	1.25	5.00	1.25
13	2 M. ft. B. M	75.00	75.00	65.00
14	2,800 cu. yds	2.50	2.75	3.00
15a	16,900 sq. yds	.75	.60	.80
b	100 sq. yds	1.00	1.10	1.10
c	3,700 sq. yds	1.50	1.50	1.45
d	100 sq. yds	1.75	1.90	1.75
e	100 sq. yds	2.00	2.30	2.10
f	100 sq. yds	2.50	2.70	2.35
16	3,060 cu. yds	30.00	35.00	30.00
17a	100 lin. ft	1.75	1.05	1.50
b	100 lin. ft	1.50	.91	1.35
c	1,460 lin. ft	1.25	.63	.85
d	200 lin. ft	1.00	.38	.50
e	100 lin. ft	.75	.29	.40
f	0 lin. ft	......	1.20	2.00
g	100 lin. ft	1.50	.89	1.50
h	1,170 lin. ft	1.00	.55	.85
18	207,400 duct ft	.15	.12	.12
19	2,560 tons	90.00	84.00	110.00
20	780 tons	80.00	72.00	100.00
21	1,530 tons	65.00	56.00	80.00
24	10 tons	75.00	71.50	60.00
25	12 tons	75.00	80.00	70.00
26	6,400 lbs.	.10	.21	.06
27	3,520 lin. ft	1.25	.50	1.00
28	8,200 sq. ft	2.50	2.60	2.00
29	5,000 sq. ft	2.00	2.27	2.15
30a	9,390 sq. yds	3.00	3.00	2.00
b	14,240 sq. yds	3.00	3.00	1.50
32a	7,600 lin. ft	.30	.25	.12
b	1,000 lin. ft	.45	.31	.22
c	520 lin. ft	.60	.45	.30
d	0 lin. ft	......	.45	.15
33	440 boxes	1.00	1.20	1.00
34	160 lin. ft	2.50	1.16	1.40
38	1,272 lin. ft	6.00	3.30	3.50
39	543 lin. ft	7.00	3.50	4.00
42	283 tons	50.00	57.00	50.00
45	554 lin. ft	15.00	7.00	7.50
48	484 lin. ft	16.00	7.85	10.75
53	1,145 lin. ft	18.00	8.30	8.00
54	284 lin. ft	19.00	8.60	8.50
75a	5,470 lin. ft	18.00	22.00	12.00
b	720 lin. ft	5.00	5.00	5.00
78	100 lin. ft	1.25	.50	.55
82	600 lin. ft	2.00	1.00	1.10
86	800 lin. ft	4.00	2.00	3.50
100	32 tons	40.00	30.00	37.00
101	8 tons	70.00	80.00	77.00
102	100 lin. ft	2.50	2.00	2.00
103	410 lin. ft	3.00	2.25	2.40
105	120 lin. ft	4.50	3.00	4.00
107	10 tons	35.00	30.00	37.00
108	3 tons	70.00	80.00	77.00
127	42,000 duct ft	.25	1.00	.30
Totals		*$3,619,315	$3,978,901	$3,802,444

*Lowest Bidder

BROADWAY-LEXINGTON AVENUE—ROUTE 5—SECTION 12.

Classification Items.	Estimated Quantities.	A	B	F
1	126,000 cu. yds	$3.45	$3.50	$3.80
2	93,000 cu. yds	7.50	7.00	6.00
2a	11,300 cu. yds	4.50	5.00	4.00
3	12,820 cu. yds	6.00	5.00	6.50
4a	4,680 ft.	110.00	150.00	82.50
b	0 ft.	.....	.....	.....
c	0 ft.	.....	.....	.....
6	42,535 cu. yds	10.00	10.00	9.50
7	5,480 cu. yds	10.00	8.00	9.50
8	874 cu. yds	8.50	8.00	6.50
9	100 cu. yds	20.00	15.00	10.00
10	1,212 cu. yds	15.00	15.00	10.00
12	1,000 lin. ft	1.50	1.25	.50
13	2 M. ft. B. M	125.00	75.00	70.00
14	3,450 cu. yds	2.75	2.50	2.00
15a	37,870 sq. yds	.80	.75	.35
b	100 sq. yds	1.30	1.00	.60
c	5,300 sq. yds	1.60	1.50	.80
d	100 sq. yds	2.10	1.75	1.00
e	100 sq. yds	2.40	2.00	1.20
f	100 sq. yds	2.80	2.50	1.40
16	6,053 cu. yds	35.00	30.00	27.00
17a	2,634 lin. ft	1.55	1.75	.90
b	100 lin. ft	1.50	1.50	.90
c	685 lin. ft	.85	1.25	.80
d	200 lin. ft	.60	1.00	.70
e	100 lin. ft	.50	.75	.60
f	0 lin. ft	.....	.....	.....
g	100 lin. ft	1.50	1.50	1.00
h	2,225 lin. ft	1.00	1.00	.60
18	319,490 duct ft	.15	.15	.09
19	754 tons	90.00	90.00	74.00
20	4,163 tons	78.00	80.00	70.00
21	95 tons	75.00	65.00	50.00
25	12 tons	70.00	75.00	40.00
26	12,760 lbs.	.10	.10	.05
27	6,320 lin. ft	.50	1.25	.80
28	8,440 sq. ft	2.20	2.50	1.50
29	8,900 sq. ft	2.10	2 00	1.75
30a	8,230 sq. yds	2.30	3.00	2.50
b	17,330 sq. yds	2.00	3.00	1.25
32a	12,455 lin. ft	.15	.30	.10
b	373 lin. ft	.30	.45	.18
c	187 lin. ft	.40	.60	.20
d	2,160 lin. ft	.12	.15	.10
33	720 boxes	1.60	1.00	1.50
34	275 lin. ft	1.70	2.50	1.50
38	2,418 lin. ft	4.80	6.00	2.75
39	830 lin. ft	5.25	7.00	3.00
42	568 tons	55.00	50.00	45.00
43	130 tons	115.00	100.00	55.00
45	1,296 lin. ft	8.20	15.00	6.00
73	1 pump	1,600.00	3,000.00	1,300.00
74	1 pump	2,400.00	3,500.00	1,500.00
75a	6,585 lin. ft	25.00	18.00	11.00
b	310 lin. ft	5 00	5.00	6.00
78	100 lin. ft	1.00	1.25	.60
79	440 lin. ft	1.00	1.50	1.00
82	1,480 lin. ft	2.50	2.00	2.25
84	190 lin. ft	4.00	3.00	3.75
90	830 lin. ft	1 00	1.00	.60
91	1,530 lin. ft	1.00	1.25	1.20
92	550 lin. ft	1.50	1.50	1.30
95	130 lin. ft	3.50	2.25	1.70
96	190 lin. ft	4.00	2.50	3.00
97	100 lin. ft	4 00	3.00	4.50
99	130 lin. ft	5.00	4.00	6.00
100	40 tons	45.00	40.00	28.00
101	10 tons	80.00	70.00	50.00
127	83,000 duct ft	.50	.25	.09
Totals		$3,397,802	$3,474,080	*$2,825,740

*Lowest Bidder.

BROADWAY-LEXINGTON AVENUE—ROUTE 5—SECTION 7.

Classification Items.	Estimated Quantities.	B	G	L	U
1	125,600 cu. yds.	$3.50	$6.25	$6.00	$3.10
2a	6,300 cu. yds.	5.00	6.25	4.00	3.10
3	221,000 cu. yds.	5.00	8.00	7.75	4.25
3a	5,800 cu. yds.	6.00	8.00	6.00	4.40
4a	1,284 ft.	150.00	110.00	150.00	17.00
b	145 ft.	200.00	285.00	300.00	30.00
c	0 ft.	..	..	700.00	..
5	17,700 cu. yds.	9.00	9.00	12.00	7.50
5a	565 cu. yds.	20.00	9.00	16.00	10.00
6	54,200 cu. yds.	10.00	13.50	11.00	7.75
7	1,240 cu. yds.	8.00	8.00	8.50	7.75
8	3,200 cu. yds.	8.00	6.00	8.50	3.00
9	800 cu. yds.	15.00	16.00	18.00	10.00
10	230 cu. yds.	15.00	14.00	15.00	9.00
11	500 Bbls.	4.50	3.75	4.00	3.00
14	2,250 cu. yds.	2.50	2.50	3.00	1.60
15a	5,535 sq. yds.	.75	.40	.80	.28
b	100 sq. yds.	1.00	.67	1.10	.50
c	10,840 sq. yds.	1.50	1.00	1.45	.65
d	100 sq. yds.	1.75	1.35	1.75	1.00
e	100 sq. yds.	2.00	1.60	2.10	1.20
f	100 sq. yds.	2.50	2.00	2.35	1.50
16	1,020 cu. yds.	30.00	40.00	30.00	18.00
17a	100 lin. ft.	1.75	1.20	1.50	.60
b	100 lin. ft.	1.50	.85	1.30	.50
c	6,500 lin. ft.	1.25	.50	.80	.40
d	200 lin. ft.	1.00	.40	.50	.35
e	100 lin. ft.	.75	.30	.40	.30
f	0 lin. ft.	..	..	2.00	..
g	100 lin. ft.	1.50	1.50	1.50	.90
h	8,570 lin. ft.	1.00	1.20	.85	.55
18	609,000 duct. ft.	.15	.12	.15	.09
19	4,390 tons	90.00	90.00	110.00	72.00
20	3,650 tons	80.00	77.00	100.00	57.00
21	380 tons	65.00	77.00	80.00	64.00
24	52 tons	75.00	90.00	60.00	56.00
25	18 tons	75.00	100.00	70.00	75.00
26	5,900 lbs.	.10	*.16	.06	.10
27	9,783 lin. ft.	1.25	.50	1.00	.75
28	10,100 sq. ft.	2.50	1.50	2.00	1.40
29	8,150 sq. ft.	2.00	2.25	2.15	1.20
30a	9,970 sq. yds.	3.00	4.00	2.50	1.20
b	15,430 sq. yds.	3.00	2.50	1.50	.60
32a	23,100 lin. ft.	.30	.16	.12	.08
b	1,070 lin. ft.	.45	.35	.22	.15
c	575 lin. ft.	.60	.50	.30	.25
d	6,610 lin. ft.	.15	.25	.15	.15
33	994 boxes	1.00	.90	1.00	1.00
34	440 lin. ft.	2.50	1.50	1.40	.80
38	2,887 lin. ft.	6.00	5.50	3.50	2.30
39	830 lin. ft.	7.00	6.50	4.00	2.80
45	1,044 lin. ft.	15.00	12.00	7.50	6.00
47	806 lin. ft.	16.00	14.00	8.25	7.00
53	300 lin. ft.	18.00	12.00	8.00	7.50
58	257 lin. ft.	40.00	18.00	19.00	13.00
75a	7,192 lin. ft.	18.00	15.00	12.00	1.00
b	0 lin. ft.	..	..	5.00	..
76	4 columns	2,000.00	1,500.00	800.00	1,000.00
78	100 lin. ft.	1.25	1.20	.55	.35
79	800 lin. ft.	1.50	2.00	.65	.40
82	340 lin. ft.	2.00	3.30	1.10	.70
84	700 lin. ft.	3.00	4.00	1.80	.90
86	140 lin. ft.	4.00	5.00	4.75	1.20
90	360 lin. ft.	1.00	1.20	.55	.30
91	200 lin. ft.	1.25	2.00	.60	.40
92	540 lin. ft.	1.50	2.40	.75	.60
94	270 lin. ft.	2.00	2.80	1.05	.70
95	470 lin. ft.	2.25	3.60	1.50	.80
96	180 lin. ft.	2.50	4.00	2.00	.90
100	40 tons	40.00	30.00	37.00	26.00
101	10 tons	70.00	80.00	77.00	65.00
121	130 lin. ft.	1.50	.80	.75	.40
122	500 lin. ft.	2.00	1.50	1.00	.60
123	30 lin. ft.	1.50	.60	.75	1.00
124	100 lin. ft.	2.00	1.20	1.00	1.50
125	1,900 lin. ft.	2.00	4.50	1.50	.60
126	10 tons	40.00	70.00	120.00	30.00
127	106,000 duct. ft.	.25	.15	.30	.13
Totals		$3,870,333	$4,955,764	$4,953,157	*$2,750,463

*Lowest Bidder.

BROADWAY-LEXINGTON AVENUE—ROUTE 5—SECTION 13.

Classification Items.	Estimated Quantities.	B	C	L	P
1	79,320 cu. yds.	$3.50	$4.00	$6.00	$4.50
2	51,360 cu. yds.	7.00	10.00	7.00	8.00
2a	2,400 cu. yds.	5.00	8.00	4.00	4.50
3	207,460 cu. yds.	5.50	6.00	7.50	6.50
3a	260 cu. yds.	6.00	10.00	6.00	6.50
4a	3,300 ft.	150.00	150.00	130.00	100.00
4b	95 ft.	200.00	200.00	300.00	140.00
4c	0 ft.	..	..	700.00	180.00
6	50,215 cu. yds.	10.00	10.50	11.00	10.50
7	3,570 cu. yds.	8.00	10.00	8.50	8.00
8	1,200 cu. yds.	8.00	10.00	8.50	8.00
9	100 cu. yds.	15.00	21.00	15.00	14.00
10	450 cu. yds.	15.00	21.00	15.00	14.00
12	1,000 lin. ft.	1.25	2.00	1.25	2.00
13	2 M. ft. B. M.	75.00	150.00	65.00	80.00
14	2,800 cu. yds.	2.50	3.50	3.00	3.00
15a	27,360 sq. yds.	.75	1.00	.80	.75
b	100 sq. yds.	1.00	1.50	1.10	.90
c	3,199 sq. yds.	1.50	2.00	1.45	1.10
d	100 sq. yds.	1.75	2.50	1.75	1.40
e	100 sq. yds.	2.00	3.00	2.10	1.50
f	590 sq. yds.	2.50	3.50	2.35	1.75
16	4,660 cu. yds.	30.00	40.00	30.00	20.00
17a	1,102 lin. ft.	1.75	2.00	1.50	1.40
b	100 lin. ft.	1.50	2,00	1.30	1.15
c	3,600 lin. ft.	1.25	1.00	.80	.75
d	200 lin. ft.	1.00	1.00	.50	.50
e	100 lin. ft.	.75	1.00	.40	.35
f	0 lin. ft.	..	..	2.00	.70
g	100 lin. ft.	1.50	2.00	1.50	1.20
h	6,790 lin. ft.	1.00	1.50	.85	.80
18	291,770 duct ft.	.15	.12	.15	.10
19	5,585 tons	90.00	95.00	110.00	85.00
20	3,905 tons	80.00	75.00	100.00	75.00
21	90 tons	65.00	70.00	80.00	70.00
25	12 tons	75.00	80.00	70.00	70.00
26	21,320 lbs.	.10	.10	.06	.08
27	6,260 lin. ft.	1.25	1.05	1.00	1.00
28	5,220 sq. ft.	2.50	2.35	2.00	2.00
29	3,960 sq. ft.	2.00	2.50	2.15	2.00
30a	8,940 sq. yds.	3.00	2.50	2.50	1.25
b	14,730 sq. yds.	3.00	2.50	1.50	2.25
32a	4,770 lin. ft.	.30	.25	.12	.10
b	820 lin. ft.	.45	.40	.22	.15
c	410 lin. ft.	.60	.60	.30	.18
d	4,320 lin. ft.	.15	.15	.15	.08
33	480 boxes	1.00	1.75	1.00	1.50
34	245 lin. ft.	2.50	2.50	1.40	1.25
38	514 lin. ft.	6.00	5.00	3.50	5.00
39	270 lin. ft.	7.00	5.75	4.00	5.50
42	10 tons	50.00	60.00	50.00	40.00
45	677 lin. ft.	15.00	10.00	7.50	8.00
75a	5,980 lin. ft.	18.00	25.00	12.00	20.00
b	0 lin. ft.	..	..	5.00	10.00
78	100 lin. ft.	1.25	1.00	.55	.50
79	1,670 lin. ft.	1.50	1.50	.65	.60
82	1,420 lin. ft.	2.00	3.00	1.10	.90
84	120 lin. ft.	3.00	4.00	1.80	1.80
87	120 lin. ft.	4.50	5.50	5.25	4.50
89	170 lin. ft.	1.00	.75	.40	.45
90	860 lin. ft.	1.00	1.00	.55	.50
91	3,430 lin. ft.	1.25	1.50	.60	.60
92	2,370 lin. ft.	1.50	2.00	.75	.70
93	230 lin. ft.	1.75	2.50	.90	.80
94	120 lin. ft.	2.00	3.00	1.05	.90
100	53 tons	40.00	60.00	37.00	38.00
101	13 tons	70.00	100.00	77.00	75.00
122	210 lin. ft.	2.00	2.00	1.00	.80
125	1,200 lin. ft.	2.00	2.00	1.50	1.50
126	6 tons	40.00	60.00	120.00	100.00
127	63,000 duct ft.	.25	.50	.30	.10
Totals		*$4,071,416	$4,628,702	$4,892,484	$4,209,594

*Lowest Bidder.

(*Continued from page 212.*)

Gas Pipes.

89. For 3-in. gas pipe, per lin. ft.
90. For 4-in. gas pipe, per lin. ft.
91. For 6-in. gas pipe, per lin. ft.
92. For 8-in. gas pipe, per lin. ft.
93. For 10-in. gas pipe, per lin. ft.
94. For 12-in. gas pipe, per lin. ft.
95. For 16-in. gas pipe, per lin. ft.
96. For 20-in. gas pipe, per lin. ft.
97. For 24-in. gas pipe, per lin. ft.
98. For 30-in. gas pipe, per lin. ft.
99. For 36-in. gas pipe, per lin. ft.
100. For new c.-i. hub and spigot straight pipe, delivered on the work, per ton of 2,000 lbs.
101. For new c.-i. hub and spigot pipe, special castings, delivered on the work, per ton of 2,000 lbs.

High Pressure Fire System Pipes, Standard Spigot and Grooves.

102. For 8-in. high pressure fire system water pipe, per lin. ft.
103. For 12-in. high pressure fire system water pipe, per lin. ft.
104. For 16-in. high pressure fire system water pipe, per lin. ft.
105. For 20-in. high pressure fire system water pipe, per lin. ft.
106. For 24-in. high pressure fire system water pipe, per lin. ft.
107. For new c.-i. spigot and groove straight pipe, delivered on the work, per ton of 2,000 lbs.
108. For new c.-i. spigot and groove pipe, special castings, delivered on the work, per ton of 2,000 lbs.

Steam Pipes.

110. For 8-in. steam pipe, per lin. ft.
111. For 12-in. steam pipe, per lin. ft.
112. For 20-in. steam pipe, per lin. ft.
113. For 15-in. steam pipe, per lin. ft.
116. For 8-in. steam pipe, per lin. ft.
119. For 15-in. steam pipe, per lin. ft.
121. For 6-in. air pipe, per lin. ft.
122. For 8-in. air pipe, per lin. ft.
123. For new 6-in. air pipe, delivered on the work, per lin. ft.
124. For new 8-in. air pipe, delivered on the work, per lin. ft.
125. For 8-in. mail tube in place, per lin. ft.
126. For new 8-in. mail tube, delivered on the work, per ton of 2,000 lbs.
127. For electric ducts and conduits in place, per duct ft.

BROADWAY-LEXINGTON AVENUE.
ROUTE 5—SECTION 4.

Classification Items.	Estimated Quantities.	B.	L.
1	181,400 cu. yds.	$3.50	$6.00
2	14,100 cu. yds.	7.50	8.00
2a	9,000 cu. yds.	5.00	4.00
3	25,700 cu. yds.	6.00	8.00
4a	2,100 ft.	200.00	225.00
b	1,600 ft.	300.00	350.00
c	70 ft.	400.00	800.00
5	33,000 cu. yds.	15.00	11.00
6	46,400 cu. yds.	10.00	11.00
7	1,200 cu. yds.	8.00	8.50
8	900 cu. yds.	8.00	8.50
9	1,300 cu. yds.	15.00	18.00
10	1,700 cu. yds.	15.00	15.00
11	1,000 bbls.	4.50	4.00
13	2 M. ft. B.M.	75.00	65.00
14	3,700 cu. yds.	2.50	3.00
15a	9,900 sq. yds.	.75	.80
b	100 sq. yds.	1.00	1.10
c	1,320 sq. yds.	1.50	1.45
d	100 sq. yds.	1.75	1.75
e	100 sq. yds.	2.00	2.10
f	100 sq. yds.	2.50	2.35
16	1,550 cu. yds.	30.00	30.00
17a	100 lin. ft.	1.75	1.50
b	100 lin. ft.	1.50	1.30
c	3,330 lin. ft.	1.25	.80
d	200 lin. ft.	1.00	.50
e	100 lin. ft.	.75	.40
f	0 lin. ft.	...	2.00
g	100 lin. ft.	1.50	1.50
h	4,420 lin. ft.	1.00	.85
18	437,000 duct ft.	.15	.15
19	1,940 tons	90.00	110.00
20	1,750 tons	80.00	100.00
21	1,250 tons	65.00	80.00
24	90 tons	75.00	60.00
25	16 tons	75.00	70.00
26	6,030 lbs.	.10	.06
27	10,140 lin. ft.	1.25	1.00
28	6,200 sq. ft.	2.50	2.00
29	900 sq. ft.	2.00	2.15
30a	6,950 sq. yds.	3.00	2.50
b	15,470 sq. yds.	3.00	1.50
31	1,350 sq. yds.	2.00	2.50
32a	4,500 lin. ft.	.30	.12
b	570 lin. ft.	.45	.22
c	310 lin. ft.	.60	.30
d	2,200 lin. ft.	.15	.15
33	242 boxes	1.00	1.00
34	25 lin. ft.	2.50	1.40
38	2,134 lin. ft.	6.00	3.50
39	170 lin. ft.	7.00	4.00
45	1,978 lin. ft.	15.00	7.50
48	228 lin. ft.	16.00	10.75
75a	4,800 lin. ft.	18.00	12.00
b	150 lin. ft.	5.00	5.00
78	100 lin. ft.	1.25	.55
79	530 lin. ft.	1.50	.65
82	1,560 lin. ft.	2.00	1.10
87	2,300 lin. ft.	4.50	5.25
90	130 lin. ft.	1.00	.55
91	1,800 lin. ft.	1.25	.60
92	1,070 lin. ft.	1.50	.75
94	270 lin. ft.	2.00	1.05
100	130 tons	40.00	37.00
101	40 tons	70.00	77.00
102	100 lin. ft.	2.50	2.00
103	90 lin. ft.	3.00	2.40
104	120 lin. ft.	4.00	3.50
107	12 tons	35.00	37.00
108	4 tons	70.00	77.00
127	49 600 duct ft.	.25	.30

Totals—*(B) $3,716,304; (L) $4,305.933.

*Lowest Bidder.

BROADWAY-LEXINGTON AVENUE ROUTE 5, SECTION 8.

Classification Items.	Estimated Quantities.	B.	G.
1	172,700 cu. yds.	$3.50	$6.25
2a	24,000 cu. yds.	5.00	6.25
3	54,000 cu. yds.	5.00	8.50
3a	2,200 cu. yds.	6.00	8.50
4a	1,743 ft.	150.00	110.00
b	0 ft.	...	...
c	0 ft.	...	...
5	78,900 cu. yds.	9.00	9.50
6	45,100 cu. yds.	10.00	12.50
7	430 cu. yds.	8.00	8.00
8	3,750 cu. yds.	8.00	6.00
9	3,480 cu. yds.	15.00	16.00
10	470 cu. yds.	15.00	14.00
11	2,000 bbls.	4.50	3.75
14	2,400 cu. yds.	2.50	2.50
15a	3,050 sq. yds.	.75	.40
b	100 sq. yds.	1.00	.67
c	7,600 sq. yds.	1.50	1.00
d	100 sq. yds.	1.75	1.35
e	100 sq. yds.	2.00	1.60
f	100 sq. yds.	2.50	2.00
16	430 cu. yds.	30.00	40.00
17a	100 lin. ft.	1.75	1.20
b	100 lin. ft.	1.50	.85
c	7,100 lin. ft.	1.25	.50
d	200 lin. ft.	1.00	.40
e	100 lin. ft.	.75	.30
f	0 lin. ft.	...	...
g	100 lin. ft.	1.50	1.50
h	11,170 lin. ft.	1.00	1.20
18	569,000 duct ft.	.15	.12
19	1,417 tons	90.00	90.00
20	760 tons	80.00	80.00
21	1,305 tons	65.00	80.00
25	5 tons	75.00	100.00
26	1,370 lbs.	.10	.16
27	12,758 lin. ft.	1.25	.50
28	8,560 sq. ft.	2.50	1.50
29	5,600 sq. ft.	2.00	2.25
30a	8,710 sq. yds.	3.00	4.00
b	17,190 sq. yds.	3.00	2.50
32a	7,865 lin ft.	.30	.16
b	706 lin. ft.	.45	.35
c	380 lin. ft.	.60	.50
d	2,200 lin. ft.	.15	.25
33	494 boxes	1.00	.90
34	90 lin. ft.	2.50	1.50
38	1,596 lin. ft.	6.00	5.50
39	1,758 lin. ft.	7.00	6.50
45	1,863 lin. ft.	15.00	12.00
47	342 lin. ft.	16.00	14.00
59	268 lin. ft.	24.00	18.00
60	260 lin. ft.	25.00	21.00
63	870 lin. ft.	32.00	42.00
65	520 lin. ft.	38.00	54.00
75a	7,624 lin. ft.	18.00	15.00
b	0 lin. ft.	...	...
78	100 lin. ft.	1.25	1.20
79	680 lin. ft.	1.50	2.00
84	60 lin. ft.	3.00	4.00
90	400 lin. ft.	1.00	1.20
91	800 lin. ft.	1.25	2.00
92	900 lin. ft.	1.50	2.40
95	60 lin. ft.	2.25	3.60
96	1,000 lin. ft.	2.50	4.00
98	250 lin. ft.	3.50	6.00
100	36 tons	40.00	30.00
101	9 tons	70.00	80.00
122	550 lin. ft.	2.00	1.50
124	100 lin. ft.	2.00	1.20
127	121,000 duct ft.	.25	.20

Totals—*(B) $3,369,484; (G) $4,107,228.

*Lowest Bidder.

BROADWAY-LEXINGTON AVENUE ROUTE 5, SECTION 9.

Classification Items.	Estimated Quantities.	B.
1	101,100 cu. yds.	$3.50
2a	18,000 cu. yds.	5.00
3	48,400 cu. yds.	5.00
3a	500 cu. yds.	6.00
4a	350 ft.	150.00
b	0 ft.	...
c	0 ft.	...
5	60,900 cu. yds.	9.00
6	36,360 cu. yds.	10.00
7	900 cu. yds.	8.00
8	4,650 cu. yds.	8.00
9	2,740 cu. yds.	15.00
10	525 cu. yds.	15.00
11	2,000 bbls.	4.50
14	1,300 cu. yds.	2.50
15a	4,860 sq. yds.	.75
b	100 sq. yds.	1.00
c	7,950 sq. yds.	1.50
d	100 sq. yds.	1.75
e	100 sq. yds.	2.00
f	100 sq. yds.	2.50
16	824 cu. yds.	30.00
17a	100 lin. ft.	1.75

b	100	lin. ft.	1.50
c	6,490	lin. ft.	1.25
d	200	lin. ft.	1.00
e	100	lin. ft.	.75
f	0	lin. ft.	...
g	100	lin. ft.	1.50
h	8,540	lin. ft.	1.00
18	491,400	duct ft.	.15
19	994	tons	90.00
20	695	tons	80.00
21	1,017	tons	65.00
24	52	tons	75.00
25	5	tons	75.00
26	1,300	lbs.	.10
27	10,520	lin. ft.	1.25
28	5,580	sq. ft.	2.50
29	2,620	sq. ft.	2.00
30a	4,790	sq. yds.	3.00
b	15,760	sq. yds.	3.00
32a	14,045	lin. ft.	.30
b	478	lin. ft.	.45
c	256	lin. ft.	.60
d	4,400	lin. ft.	.15
33	612	boxes	1.00
34	300	lin. ft.	2.50
38	2,800	lin. ft.	6.00
39	530	lin. ft.	7.00
42	12	tons	50.00
45	1,250	lin. ft.	15.00
60	1,200	lin. ft.	25.00
62	240	lin. ft.	28.00
75a	6,196	lin. ft.	18.00
b	0	lin. ft.	...
78	100	lin. ft.	1.25
79	330	lin. ft.	1.50
82	1,050	lin. ft.	2.00
83	106	lin. ft.	2.50
90	330	lin. ft.	1.00
91	1,200	lin. ft.	1.25
92	280	lin. ft.	1.50
94	290	lin. ft.	2.00
96	530	lin. ft.	2.50
100	30	tons	40.00
101	8	tons	70.00
122	410	lin. ft.	2.00
124	100	lin. ft.	2.00
127	170,000	duct ft.	.25

Total—*$2,447,479.

*Lowest Bidder.

BROADWAY-LEXINGTON AVE. ROUTE 5, SECTION 10.

Classification Items.	Estimated Quantities.		B.	X.
1	44,700	cu. yds.	$3.50	$7.40
2a	2,500	cu. yds.	5.00	7.00
3	150,100	cu. yds.	5.00	7.90
3a	700	cu. yds.	6.00	16.40
4a	910	ft.	150.00	50.00
b	100	ft.	200.00	50.00
c	0	ft.	....	....
5	91,800	cu. yds.	9.00	11.40
6	49,540	cu. yds.	10.00	12.40
7	260	cu. yds.	8.00	12.40
8	2,300	cu. yds.	8.00	8.00
9	1,940	cu. yds.	15.00	20.00
10	65	cu. yds.	15.00	17.50
11	2,500	bbls.	4.50	5.00
14	1,000	cu. yds.	2.50	2.50
15a	5,820	sq. yds.	.75	.25
b	100	sq. yds.	1.00	.40
c	4,820	sq. yds.	1.50	.60
d	100	sq. yds.	1.75	.75
e	100	sq. yds.	2.00	.95
f	100	sq. yds.	2.50	1.15
16	595	cu. yds.	30.00	17.20
17a	100	lin. ft.	1.75	2.50
b	100	lin. ft.	1.50	2.50
c	4,100	lin. ft.	1.25	1.90
d	200	lin. ft.	1.00	1.90
e	100	lin. ft.	.75	1.25
f	0	lin. ft.	...	...
g	100	lin. ft.	1.50	2.50
h	10,300	lin. ft.	1.00	2.50
18	576,300	duct ft.	.15	.18
19	2,655	tons	90.00	91.00
20	2,574	tons	80.00	79.00
21	588	tons	65.00	100.00
25	5	tons	75.00	80.00
26	6,970	lbs.	.10	.10
27	14,968	lin. ft.	1.25	.36
28	6,070	sq. ft.	2.50	6.00
29	234	sq. ft.	2.00	1.90
30a	4,130	sq. yds.	3.00	7.00
b	8,340	sq. yds.	3.00	4.50
32a	9,065	lin. ft.	.30	.12
b	908	lin. ft.	.45	.24
c	477	lin. ft.	.60	.33
d	4,400	lin. ft.	.15	.14
33	466	boxes	1.00	25.00
34	75	lin. ft.	2.50	5.00
38	1,985	lin. ft.	6.00	3.75
42	25	tons	50.00	100.00
44	80	lin. ft.	...	6.25
45	95	lin. ft.	15.00	6.80
47	210	lin. ft.	...	8.75
51	70	lin. ft.	...	13.75
75a	3,900	lin. ft.	18.00	75.00
b	0	lin. ft.	...	...
78	100	lin. ft.	1.25	3.75
79	120	lin. ft.	1.50	3.75
82	460	lin. ft.	2.00	5.00
90	200	lin. ft.	1.00	1.90
91	540	lin. ft.	1.25	2.50
92	350	lin. ft.	1.50	3.75
94	100	lin. ft.	2.00	5.00
96	120	lin. ft.	2.50	6.25
100	12	tons	40.00	33.00
101	3	tons	70.00	90.00
121	150	lin. ft.	1.50	2.50
127	19,000	duct. ft.	.25	2.50

Totals, (B) *$3,253,072; (X) $4,476,855.

*Lowest Bidder.

BROADWAY-LEXINGTON AVENUE, ROUTE 5—SECTION 11.

Classification Items	Estimated Quantities		B	X.
1	52,100	cu. yds.	$3.50	$7.60
2	22,700	cu. yds.	9.00	11.60
2a	3,600	cu. yds.	5.00	7.20
3	81,300	cu. yds.	5.00	8.10
3a	1,900	cu. yds.	6.00	16.60
4a	2,300	ft.	150.00	60.00
b	0	ft.	....	....
c	0	ft.	....	....
5	82,900	cu. yds.	9.00	11.60
6	39,170	cu. yds.	10.00	12.60
7	2,060	cu. yds.	8.00	12.60
8	2,270	cu. yds.	8.00	8.00
9	1,880	cu. yds.	15.00	20.00
10	1,340	cu. yds.	15.00	17.50
11	2,500	bbls.	4.50	5.00
12	1,000	lin. ft.	1.25	.75
13	2	M. ft. B. M.	75.00	75.00
14	1,760	cu. yds.	2.50	2.50
15a	17,850	sq. yds.	.75	.25
b	100	sq. yds.	1.00	.40
c	8,800	sq. yds.	1.50	.60
d	100	sq. yds.	1.75	.75
e	100	sq. yds.	2.00	.95
f	100	sq. yds.	2.50	1.15
16	2,500	cu. yds.	30.00	17.20
17a	2,340	lin. ft.	1.75	2.50
b	100	lin. ft.	1.50	2.50
c	2,200	lin. ft.	1.25	1.90
d	100	lin. ft.	1.00	1.90
e	100	lin. ft.	.75	1.25
f	0	ft.	...	...
g	100	lin. ft.	1.50	2.50
h	8,730	lin. ft.	1.00	2.50
18	409,480	duct ft.	.15	.18
19	1,480	tons	90.00	91.00
20	2,480	tons	80.00	79.00
21	300	tons	65.00	100.00
25	7	tons	75.00	80.00
26	6,640	lbs.	.10	.10
27	6,960	lin. ft.	1.25	.36
28	5,535	sq. ft.	2.50	6.00
29	4,420	sq. ft.	2.00	1.90
30a	5,570	sq. yds.	3.00	7.00
b	9,470	sq. yds.	3.00	4.50
32a	15,260	lin. ft.	.30	.12
b	373	lin. ft.	.45	.24
c	187	lin. ft.	.60	.33
d	2,160	lin. ft.	.15	.14
33	587	boxes	1.00	25.00
34	250	lin. ft.	2.50	5.00
38	1,405	lin. ft.	6.00	3.75
42	51	tons	50.00	100.00
45	975	lin. ft.	15.00	6.80
46	308	lin. ft.	15.00	8.75
75a	3,560	lin. ft.	18.00	75.00
b	40	lin. ft.	5.00	30.00
78	100	lin. ft.	1.25	3.75
79	580	lin. ft.	1.50	3.75
82	660	lin. ft.	2.00	5.00
88	170	lin. ft.	5.00	31.25
90	100	lin. ft.	1.00	1.90
91	1,260	lin. ft.	1.25	2.50
92	930	lin. ft.	1.50	3.75
100	29	tons	40.00	33.00
101	7	tons	70.00	90.00
127	38,000	duct ft.	.25	2.50

Total—*(B) $3,132,195; (X) $4,159,085.

*Lowest Bidder.

BROADYAY-LEXINGTON AVENUE ROUTE 5—SECTION 5.

Classification Items.	Estimated Quantities.		B	L	O
1	10,600	cu. yds.	$4.50	$6.26	$4.75
2a	17,500	cu. yds.	5.00	4.00	4.75
3	21,800	cu. yds.	5.00	8.80	5.50
3a	3,800	cu. yds.	6.00	6.00	6.00
4a	400	ft.	150.00	150.00	175.00
b	0	ft.	......	300.00	350.00
c	0	ft.	......	700.00	500.00
5	75,300	cu. yds.	9.00	12.00	9.50
6	37,800	cu. yds.	10.00	11.40	10.60
7	620	cu. yds.	8.00	8.50	10.00
8	350	cu. yds.	8.00	8.50	6.00
9	3,100	cu. yds.	15.00	18.00	20.00
10	1,400	cu. yds.	15.00	15.00	14.25
11	2,000	bbls.	4.50	4.00	5.00
13	2	M. ft. B. M.	75.00	65.00	75.00
14	3,500	cu. yds.	2.50	3.00	2.15
15a	5,900	sq. yds.	.75	.80	.40
b	100	sq. yds.	1.00	1.10	.60
c	5,600	sq. yds.	1.50	1.45	.85
d	100	sq. yds.	1.75	1.75	1.10
e	100	sq. yds.	2.00	2.10	1.36
f	100	sq. yds.	2.50	2.35	1.60
16	770	cu. yds.	30.00	30.00	28.75
17a	100	lin. ft.	1.75	1.50	.75
b	100	lin. ft.	1.50	1.30	.65
c	6,600	lin. ft.	1.25	.80	.50
d	200	lin. ft.	1.00	.50	.40
e	100	lin. ft.	.75	.40	.35
f	0	lin. ft.	......	2.00	1.25
g	100	lin. ft.	1.50	1.50	1.00
h	9,000	lin. ft.	1.00	.85	.75
18	525,000	duct ft.	.15	.15	.10
19	270	tons	90.00	110.00	71.50
20	650	tons	80.00	100.00	65.00
21	1,150	tons	65.00	80.00	50.00
24	130	tons	75.00	60.00	75.00
25	15	tons	75.00	70.00	60.00
26	1,400	lbs.	.10	.06	.05
27	11,100	lin. ft.	1.25	1.00	.15
28	8,300	sq. ft.	2.50	2.00	1.00
29	5,500	sq. ft.	2.00	2.15	1.60
30a	5,950	sq. yds.	3.00	2.50	2.00
b	14,050	sq. yds.	3.00	1.50	2.00
31	1,000	sq. yds.	2.00	2.50	1.50
32a	15,550	lin. ft.	.30	.12	.10
b	450	lin. ft.	.45	.22	.15
c	230	lin. ft.	.60	.30	.20
d	4,000	lin. ft.	.15	.15	.15
33	640	boxes	1.00	1.00	.25
34	40	lin. ft.	2.50	1.40	1.50
38	1,738	lin. ft.	6.00	3.50	4.00
39	280	lin. ft.	7.00	4.00	5.15
42	4	tons	50.00	50.00	30.00
45	1,465	lin. ft.	15.00	7.50	8.00
47	248	lin. ft.	16.00	8.25	10.00
48	240	lin. ft.	16.00	10.75	11.00
49	242	lin. ft.	17.00	11.50	11.60
50	246	lin. ft.	17.00	12.00	12.60
52	264	lin. ft.	16.00	7.50	9.60
60	1,250	lin. ft.	25.00	14.00	17.00
75a	2,300	lin ft.	18.00	12.00	15.00
b	200	lin. ft.	5.00	5.00	10.00
78	100	lin. ft.	1.25	.55	.75
79	1,800	lin. ft.	1.50	.65	1.00
90	560	lin. ft.	1.00	.55	.75
91	1,490	lin. ft.	1.25	.60	1.00
92	720	lin. ft.	1.50	.75	1.00
94	580	lin. ft.	2.00	1.05	1.50
100	20	tons	40.00	37.00	30.00
101	5	tons	70.00	77.00	70.00
127	86,000	duct ft.	.25	.30	.15
Total			$2,473,159	$2,958,465	*$2,419.127

Lowest Bidder.

CLASSIFICATION ROUTES 9 AND 20.

The following classification is used for all sections of Route 9 and Route 20:

Item. Classifications.

1. For excavation, above mean high water (except excavation for sewers and pipes), including the disposal of it, etc., per cu. yd.
2. For excavation, below mean high water (except excavation for sewers and pipes), including the disposal of it, etc., per cu. yd.

2a. For excavation, both above and below mean high water, for sewers and pipes, including the disposal of it, etc., per cu. yd.

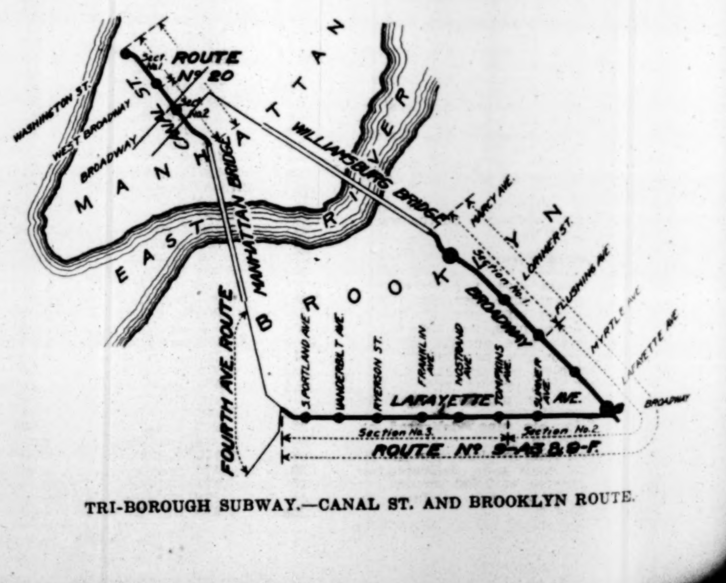
3. For underpinning buildings, including all incidental work and material, per lineal front ft. of building underpinned as follows:
   - (a) For buildings less than seven stories in height, per front ft.
   - (b) For buildings from seven to twelve stories in height, per front ft.
   - (c) For buildings over twelve stories in height, per front ft.
4. For concrete masonry, in place, per cu. yd.
5. For protective concrete masonry in place, outside of waterproofing, per cu. yd.
6. Rubble stone masonry, per cu. yd.
7. For brick masonry, in place, per cu. yd.
8. For hollow terra cotta brick masonry, in place, per cu. yd.
9. For timber piles, in place and prepared, per lin. ft.
10. For timber, foundations placed and fastened, per M. ft., B. M.
11. For broken stone or gravel in place, other than that used in concrete, per cu. yd.
12. For waterproofing, treated woven fabric, laid with pitch or asphaltum, in place, as follows:
    - (a) For 1-ply, per sq. yd.
    - (b) For 2-ply, per sq. yd.
    - (c) For 3-ply, per sq. yd.
    - (d) For 4-ply, per sq. yd.
    - (e) For 5-ply, per sq. yd.
    - (f) For 6-ply, per sq. yd.
13. For waterproofing, brick laid in asphalt mastic, in place, per cu. yd.
14. For vitrified or cast-iron drain pipe, in place, as follows:
    - (a) For 12-inch vitrified pipe, per lin. ft.
    - (b) For 10-inch vitrified pipe, per lin. ft.
    - (c) For 8-inch vitrified pipe, per lin. ft.
    - (d) For 6-inch vitrified pipe, per lin. ft.
    - (e) For 4-inch vitrified pipe, per lin. ft.
    - (f) For 8-inch cast-iron pipe, per lin. ft.
    - (g) For 6-inch cast-iron pipe, per lin. ft.
    - (h) For 4-inch cast-iron pipe, per lin. ft.
15. For tunnel ducts, in place, per duct ft.
16. For riveted steel, painted and erected, per ton of 2,000 lbs.
17. For steel beams and shapes with connections, painted and erected, per ton of 2,000 lbs.
18. For steel rods and bars built in concrete, per ton of 2,000 lbs.
19. For cast-iron columns erected and painted, per ton of 2,000 lbs.
20. For miscellaneous iron castings, other than tunnel lining, such as manhole heads and covers, gratings, etc., but not including castings for sewer work or pipes; in place, per ton of 2,000 lbs.
21. For wire mesh, in place, per lb.
22. For 1½-in. galvanized iron pipe hand rail, in place, including expansion bolts, etc., per lin. ft.
23. For steel gratings for ventilation, in place, including frames, etc., per sq. ft.
24. For vault lights, in place, per sq. ft.
25. For street surface restored:
    - (a) Sidewalks including curbs and all structures and growths therein and thereon, per sq. yd.
    - (b) For temporary repavement and maintenance of roadways, per sq. yd.
27. For wrought-iron or fiber electric conduits, in place, in stations, as follows:
    - (a) For ¾-in. wrought-iron, per lin. ft.
    - (b) For 1½-in. wrought-iron, per lin. ft.
    - (c) For 2-in. wrought-iron, per lin. ft.
    - (d) For 2-in. fiber, per lin. ft.
28. For cast-iron outlet boxes in place in stations, each.
29. For 6-in. cast-iron pipe and fittings, including specials ("extra heavy"), in place in stations, per lin. ft.

Sewers.

30. For 12-in. vitrified pipe sewer, per lin. ft.
31. For 15-in. vitrified pipe sewer, per lin. ft.
33. For 20-in. vitrified pipe sewer, per lin. ft.
34. For 24-in. vitrified pipe sewer, per lin. ft.
35. For cast-iron sewer pipe (straight pipe), in place in the work, per ton of 2,000 lbs.
36. For cast-iron sewer pipe (special casting), in place in the work, per ton of 2,000 lbs.

Egg-Shaped Brick or Concrete Sewers.

37. For 3 ft. 6 in. × 2 ft. 4 in. per lin. ft.
38. For 3 ft. 9 in. × 2 ft. 6 in. per lin. ft.
39. For 4 ft. 0 in. × 2 ft. 8 in. per lin. ft.
40. For 4 ft. 3 in. × 2 ft. 10 in. per lin. ft.
41. For 4 ft. 6 in. × 3 ft. per lin. ft.
42. For 4 ft. 9 ins. × 3 ft. 2 in. per lin. ft.
43. For 5 ft. × 3 ft. 4 in. per lin. ft.
44. For 5 ft. 3 in. × 3 ft. 6 in. per lin. ft.



TRI-BOROUGH SUBWAY.—CANAL ST. AND BROOKLYN ROUTE.

BROADWAY-LAFAYETTE AVENUE. ROUTE 9—SECTION 2.

Classification Item.	Estimated Quantity.	B	G	M	P	R
1	178,700 cu. yds.	$3.00	$4.00	$3.95	$3.85	$3.90
2	610 cu. yds.	5.00	5.00	10.00	7.50	5.00
2a	46,500 cu. yds.	3.00	3.00	3.95	3.85	2.70
3a	3,690 ft.	100.00	65.00	110.00	100.00	100.00
3b	0 ft.	.....	.....	200.00	140.00	.....
3c	0 ft.	.....	.....	250.00	180.00	.....
4	76,800 cu. yds.	9.00	10.00	9.65	10.00	10.00
5	1,350 cu. yds.	8.00	6.50	10.50	8.00	10.00
7	170 cu. yds.	15.00	14.30	20.00	14.00	11.00
8	5,930 cu. yds.	15.00	11.70	14.25	14.00	11.50
9	1,000 lin. ft.	1.25	1.00	.50	2.00	.70
10	2 M. ft. B. M.	75.00	78.00	75.00	80.00	60.00
11	5,330 cu. yds.	2.50	2.30	2.15	3.00	2.50
12a	22,330 sq. yds.	.75	.52	.40	.75	.65
b	100 sq. yds.	1.00	.75	.60	.90	1.05
c	8,820 sq. yds.	1.50	1.05	.85	1.10	1.46
d	100 sq. yds.	1.75	1.35	1.10	1.40	1.86
e	100 sq. yds.	2.00	1.65	1.36	1.50	2.28
f	100 sq. yds.	2.50	1.95	1.60	1.75	2.69
13	2,010 cu. yds.	30.00	40.00	28.75	20.00	12.00
14a	100 lin. ft.	1.75	.78	.75	1.40	.56
b	100 lin. ft.	1.50	.65	.65	1.15	.39
c	2,580 lin. ft.	1.25	.40	.50	.75	.28
d	200 lin. ft.	1.00	.25	.40	.50	.20
e	100 lin. ft.	.75	.20	.35	.35	.16
f	0 lin. ft.	.....	.....	1.25	1.60	.....
g	100 lin. ft.	1.50	1.20	1.10	1.20	1.00
h	100 lin. ft.	1.25	.90	1.00	.80	.80
15	592,000 duct. ft.	.15	.10½	.11	.10	.10
16	6,050 tons	90.00	91.00	75.00	85.00	98.00
17	4,770 tons	80.00	67.50	60.00	75.00	85.40
18	1,060 tons	65.00	65.00	45.00	70.00	55.00
19	13 tons	75.00	80.00	60.00	70.00	60.00
20	97 tons	75.00	104.00	65.00	70.00	45.00
21	12,160 lbs.	.10	.12	.05	.08	.07
22	11,670 lin. ft.	1.25	.40	.12	1.00	1.20
23	8,310 sq. ft.	2.50	1.60	.75	2.00	.70
24	4,850 sq. ft.	2.00	2.00	1.65	2.00	2.00
25a	17,900 sq. yds.	3.00	3.50	1.50	1.25	3.50
25b	35,710 sq. yds.	3.00	2.50	1.40	2.75	3.50
27a	15,900 lin. ft.	.30	.13	.10	.10	.08
b	910 lin. ft.	.45	.26	.20	.15	.18
c	490 lin. ft.	.60	.40	.25	.18	.24
d	6,610 lin. ft.	.15	.20	.20	.08	.14
28	1,050 boxes	1.00	.78	.30	1.50	1.00
29	165 lin. ft.	2.50	1.20	1.75	1.25	1.50
30	2,390 lin. ft.	5.00	3.90	4.00	4.50	3.39
31	831 lin. ft.	6.00	4.65	4.50	5.00	3.30
32	900 lin. ft.	7.00	5.20	5.00	5.50	3.87
33	1,035 lin. ft.	8.00	5.75	5.50	6.50	4.02
34	2,790 lin. ft.	9.00	6.50	5.90	8.00	5.26
35	66 tons	50.00	52.00	35.00	38.00	40.60
36	10 tons	100.00	91.00	60.00	75.00	81.20
37	1,608 lin. ft.	15.00	9.00	8.00	9.00	3.73
38	780 lin. ft.	15.00	9.75	9.00	9.50	4.23
39	3,355 lin. ft.	16.00	10.40	10.00	10.00	5.44
41	960 lin. ft.	17.00	11.70	11.50	13.25	5.93
44	180 lin. ft.	18.00	14.30	14.00	15.00	8.05
46	15 lin. ft.	18.00	10.40	10.50	10.00	4.86
47	375 lin. ft.	19.00	11.05	12.00	10.75	6.53
49	540 lin. ft.	20.00	11.70	14.00	14.00	6.83
62a	12,320 lin. ft.	10.00	3.50	10.00	20.00	9.00
b	0 lin. ft.	.....	.....	10.00	10.00	.....
63	110 columns	2,000.00	780.00	250.00	800.00	900.00
64	100 lin. ft.	1.00	1.95	.50	.45	.25
65	100 lin. ft.	1.25	2.60	.75	.50	.30
66	3,600 lin. ft.	1.50	3.38	1.00	.60	.35
67	120 lin. ft.	1.75	3.90	1.50	.70	.45
68	890 lin. ft.	2.00	4.30	2.00	1.00	.60
70	1,500 lin. ft.	3.00	6.90	2.50	1.60	1.00
71	590 lin. ft.	4.00	11.35	3.50	2.80	2.00
72	100 lin. ft.	4.50	13.00	4.00	5.00	3.00
73	880 lin. ft.	5.00	17.55	5.00	10.50	5.00
75	750 lin. ft.	1.00	2.60	.75	.50	.28
76	820 lin. ft.	1.25	3.38	1.00	.60	.30
77	410 lin. ft.	1.50	3.90	1.25	.70	.35
78	200 lin. ft.	1.75	3.90	1.25	.90	.40
79	50 lin. ft.	2.00	4.30	1.50	1.10	.45
80	120 lin. ft.	2.25	5.60	2.00	1.50	.75
83	142 tons	40.00	39.00	30.00	38.00	40.60
84	35 tons	70.00	78.00	60.00	75.00	81.20
91	25,000 duct ft.	.25	.65	.16	.10	.14

Totals: B, $4,726,259; G, $4,802,919; M, *$4,676,941; P, $5,022,709; R, $4,937,874.

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*Lowest Bidder.

BROADWAY-LAFAYETTE AVENUE—ROUTE 9—SECTION 1.

Classification Items.	Estimated Quantities.	B	D	G	R
1	233,600 cu. yds.	$3.25	$4.62	$5.50	$4.20
2	86,900 cu. yds.	4.50	12.33	7.00	6.70
2a	29,000 cu. yds.	4.00	2.00	3.50	2.00
3a	4,050 ft.	100.00	125.00	85.00	80.00
b	0 ft.	.....	300.00	.....	.....
c	0 ft.	.....	600.00	.....	.....
4	74,630 cu. yds.	9.00	8.97	10.75	10.00
5	6,050 cu. yds.	8.00	8.00	6.70	10.00
7	530 cu. yds.	15.00	16.00	14.75	11.00
8	2,420 cu. yds.	15.00	12.00	12.00	12.00
9	1,000 lin. ft.	1.25	5.00	1.10	.70
10	2 M. ft. B. M.	75.00	75.00	80.00	100.00
11	2,830 cu. yds.	2.50	2.75	2.35	2.50
12a	44,800 sq. yds.	.75	.60	.52	.65
b	100 sq. yds.	1.00	1.10	.75	1.05
c	9,850 sq. yds.	1.50	1.50	1.05	1.46
d	100 sq. yds.	1.75	1.90	1.35	1.86
e	100 sq. yds.	2.00	2.30	1.65	2.28
f	100 sq. yds.	2.50	2.70	1.95	2.69
13	6,840 cu. yds.	30.00	35.00	40.00	12.00
14a	100 lin. ft.	1.75	1.05	.80	.56
b	100 lin. ft.	1.50	.91	.67	.39
c	2,760 lin. ft.	1.25	.63	.40	.28
d	200 lin. ft.	1.00	.38	.27	.20
e	100 lin. ft.	.75	.29	.20	.16
f	0 lin. ft.	.....	1.20	.....	.....
g	100 lin. ft.	1.50	.89	1.20	1.00
h	100 lin. ft.	1.25	.55	.94	.80
15	323,520 duct ft.	.15	.12	.10½	.10
16	3,130 tons	90.00	84.00	94.00	98.00
17	5,290 tons	80.00	72.00	70.00	85.40
18	390 tons	65.00	56.00	67.00	55.00
20	9 tons	75.00	80.00	100.00	45.00
21	10,600 lbs.	.10	.21	.12	.07
22	6,320 lin. ft.	1.25	.50	.40	1.20
23	6,390 sq. ft.	2.50	2.60	1.56	.70
24	8,730 sq. ft.	2.00	2.27	1.95	2.00
15a	11,020 sq. yds.	3.00	3.00	3.50	3.50
b	30,000 sq. yds.	3.00	2.50	2.00	3.00
27a	14,930 lin. ft.	.30	.25	.13	.08
b	540 lin. ft.	.45	.31	.26	.18
c	290 lin. ft.	.60	.45	.40	.24
d	2,200 lin. ft.	.15	.45	.20	.14
28	690 boxes	1.00	1.20	.78	1.00
29	290 lin. ft.	2.50	1.16	1.20	1.50
30	3,168 lin. ft.	5.00	3.00	4.00	3.00
31	1,004 lin. ft.	6.00	3.15	4.80	2.87
32	849 lin. ft.	7.00	3.30	5.40	3.73
33	190 lin. ft.	8.00	3.55	6.00	2.80
37	4,306 lin. ft.	15.00	7.00	9.40	4.39
38	1,100 lin. ft.	15.00	7.25	10.05	3.93
39	1,100 lin. ft.	16.00	7.40	10.70	4.81
41	946 lin. ft.	17.00	8.00	11.40	5.33
46	900 lin. ft.	18.00	8.30	10.70	4.56
48	35 lin. ft.	.....	.....	.....	.....
60	424 lin. ft.	.....	.....	.....	.....
62a	15,740 lin. ft.	10.00	6.00	3.50	9.00
b	0 lin. ft.	.....	5.00	.....	.....
63	163 columns	2,000.00	650.00	1,000.00	900.00
64	100 lin. ft.	1.00	.35	2.00	.25
65	100 lin. ft.	1.25	.50	2.70	.30
66	360 lin. ft.	1.50	.70	3.50	.35
67	830 lin. ft.	1.75	.80	4.00	.45
68	435 lin. ft.	2.00	1.00	4.40	.60
70	1,365 lin. ft.	3.00	1.75	7.10	1.00
71	800 lin. ft.	4.00	2.00	11.75	2.00
75	250 lin. ft.	1.00	.50	2.70	.25
76	100 lin. ft.	1.25	.70	3.50	.30
77	180 lin. ft.	1.50	.80	4.00	.35
78	100 lin. ft.	1.75	.90	4.00	.40
79	1,330 lin. ft.	2.00	1.00	4.40	.45
82	100 lin. ft.	3.00	1.75	9.40	1.50
83	76 tons	40.00	30.00	40.00	40.60
84	19 tons	70.00	80.00	80.00	81.20
91	9,000 duct ft.	.25	1.00	.67	.14
Totals		$4,318,700	$4,926,512	$4,764,782	*$4,265,424

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*Lowest Bidder.

Circular Sewers—Brick or Concrete or Reinforced Concrete.

45. For 3 ft. per lin. ft.
46. For 4 ft. per lin. ft.
47. For 4 ft. 6 in. per lin. ft.
48. For 4 ft. 9 in. per lin. ft.
49. For 5 ft. per lin. ft.
50. For 5 ft. 6 in. per lin. ft.
51. For 5 ft. 9 in. per lin. ft.
52. For 6 ft. per lin. ft.
53. For 6 ft. 6 in. per lin. ft.
54. For 7 ft. per lin. ft.

Sewers or Special Forms.

55. For 6 ft. × 10 ft. 4 in. per lin. ft.
56. For 6 ft. × 12 ft. 10 in. per lin. ft.
57. For 6 ft. 5 in. × 12 ft. 10 in. per lin. ft.
58. For 5 ft. 2 in. × 15 ft. 10 in. per lin. ft.
59. For 6 ft. 6 in. × 15 ft. 10 in. per lin. ft.
60. For 9 ft. 6 in. × 13 ft. per lin. ft.
61. For 13 ft. × 15 ft. per lin ft.
62. For street surface railroads, including the support, reconstruction, rebuilding, etc., where necessary (but not including permanent masonry supports, if required and added, and not including additional vaults, if required and constructed in excess of the number existing), as follows:
    (a) For electric railroads, per lin. ft. of single track.
    (b) For horse railroads, per lin. ft. of single track.
63. For the temporary and permanent support and maintenance of elevated railroad structures, and all work incidental thereto, per column.

Pipes in Streets.

64. For 3-in. water pipe, per lin. ft.
65. For 4-in. water pipe, per lin. ft.
66. For 6-in. water pipe, per lin. ft.
67. For 8-in. water pipe, per lin. ft.
68. For 12-in. water pipe, per lin. ft.
69. For 16-in. water pipe, per lin. ft.
70. For 20-in. water pipe, per lin. ft.
71. For 30-in. water pipe, per lin. ft.
72. For 36-in. water pipe, per lin. ft.
73. For 48-in. water pipe, per lin. ft.

Gas Pipes.

74. For 3-in. gas pipe, per lin. ft.
75. For 4-in. gas pipe, per lin. ft.
76. For 6-in. gas pipe, per lin. ft.
77. For 8-in. gas pipe, per lin. ft.
78. For 10-in. gas pipe, per lin. ft.
79. For 12-in. gas pipe, per lin. ft.
80. For 16-in. gas pipe, per lin. ft.
81. For 20-in. gas pipe, per lin. ft.
82. For 24-in. gas pipe, per lin. ft.

New Cast-Iron Hub and Spigot Water and Gas Pipe.

83. For new cast-iron hub and spigot straight pipe delivered on the work, per ton of 2,000 lbs.
84. For new cast-iron hub and spigot pipe, special castings, delivered on the work, per ton of 2,000 lbs.

High Pressure Fire System Pipes, Standard Spigot and Grooves.

85. For 8-in. high pressure water pipe, per lin. ft.
86. For 12-in. high pressure water pipe, per lin. ft.
87. For 16-in. high pressure water pipe, per lin. ft.
88. For 24-in. high pressure water pipe, per lin. ft.

New Cast-Iron Spigot and Groove Pipe for High Pressure Fire System.

89. For new cast-iron spigot and groove straight pipe delivered on the work, per ton of 2,000 lbs.
90. For new cast-iron spigot and groove pipe, special castings, delivered on the work, per ton of 2,000 lbs.

Ducts in Streets.

91. For electric ducts and conduits in place, per duct ft.

CONTRACT PRICES TRI-BOROUGH SUBWAY.

THE ROUTES AND BIDDERS OF THE TRI-BOROUGH SUBWAY.

ROUTE 5—BROADWAY-LEXINGTON AVE.

Section 1 begins under Battery Park and extends thence under Battery Pl., Greenwich St., Trinity Pl. and Church St. to a point about 80 ft. north of the center line of Dey St.; with stations in Battery Park, Rector St. and at Cortlandt and Dey Sts. The bidders are: Bradley Contracting Co.; Degnon Contracting Co.; McArthur Bros. Co.; O'Rourke Engineering Construction Co.

Section 2 begins at the end of Section 1 and extends thence under Church St., private property, Vesey St., private property and Broadway to a point under Broadway about 110 ft. north of the center line of Walker St.; with a station at Murray and Warren Sts. The bidders are: Bradley Contracting Co.; Frederick L. Cranford; McArthur Bros. Co.; O'Rourke Engineering Construction Co.

Section 2A begins at the end of Section 2 and extends thence under Broadway to a point about on the northerly building line of Howard St. This section includes the Canal St. station and also the portion of the Canal St. subway lying thereunder. The bidders are: Bradley Contracting Co.; Frederick L. Cranford; McArthur Bros. Co.

Section 3 begins at the end of Section 2A and extends thence under Broadway to a point about midway between Houston and Bleecker Sts., with a station at Prince St. The bidders are: Bradley Contracting Co.; Frederick L. Cranford; McArthur Bros. Co.

Section 4 begins at the end of Section 3 and extends thence under Broadway, private property and the several cross streets to a point under private property at the southerly line of East 14th St. and Irving Pl. with a station at Astor Pl. and East Eighth St. The bidders are: Bradley Contracting Co., McArthur Bros. Co.

Section 5 begins at the end of Section 4 and extends thence under Irving Pl., Gramercy Park and Lexington Ave., to a point about 140 ft. north of the center line of East 26th St., with stations at East 14th and 15th Sts., and at East 23d St. The bidders are: Bradley Contracting Co.; McArthur Bros. Co.; Metropolitan Contracting Co.

Section 6 begins at the end of Section 5 and extends thence under Lexington Ave. to about the center line of East 40th St., with stations at East 27th and 28th Sts. and at East 34th St. The bidders are: Bradley Contracting Co.; Degnon Contracting Co.; McArthur Bros. Co.

Section 7 begins at the end of Section 6 and extends thence under Lexington Ave. to a point about 50 ft. north of the center line of East 53d St.; with stations at East 42d and 43d Sts., and at East 51st St. The bidders are: Bradley Contracting Co.; Degnon Contracting Co.; McArthur Bros. Co.; Charles H. Peckworth.

Section 8 begins at the end of Section 7 and extends thence under Lexington Ave. to a point about 50 ft. north of the center line of East 67th St., with a station at East 58th and 59th Sts. The bidders are: Bradley Contracting Co.; Degnon Contracting Co.

Section 9 begins at the end of Section 8 and extends thence under Lexington Ave. to a point about 70 ft. south of the center line of 79th St., with stations at East 68th and 69th Sts., and at East 77th St. The bidder is Bradley Contracting Co.

Section 10 begins at the end of Section 9 and extends thence under Lexington Ave. to a point about 50 ft. south of the center line of East 93d St., with a station at East 86th St. The bidders are: Bradley Contracting Co.; Henry Steers.

Section 11 begins at the end of Section 10 and extends thence under Lexington Ave. to a point about 70 ft. south of the center line of East 106th St., with stations at East 96th St. and at East 102d and 103d Sts. The bidders are: Bradley Contracting Co.; Henry Steers.

Section 12 begins at the end of Section 11 and extends thence under Lexington Ave. to a point about 115 ft. south of the center line of East 118th St., with stations at East 110th and 111th Sts., and at East 116th St. The bidders are: Behrman & Rodgers; Bradley Contracting Co.; Oscar Daniels Co.

Section 13 begins at the end of Section 12 and extends thence under Lexington Ave. to a point about 120 ft. south of the center line of East 129th St., with a station at East 125th St. The bidders are: Bradley Contracting Co.; Brody & Adler; McArthur Bros. Co.; Hugh Nawn Contracting Co.

Section 14 begins at the end of Section 13 and extends thence under Lexington Ave., private property, and the Harlem River to a point in private property in the Borough of The Bronx, thence under private property and Park Ave. to East 135th St. Here the line divides into two branches. The west branch begins at about the center line of East 135th St. and extends thence under private property to a point in private property a distance of about 655 ft. from the center line of East 135th St. and about 50 ft. west of the center line of Mott Ave. The east branch extends under Park Ave. and

BROADWAY-LAFAYETTE AVENUE ROUTE 9—SECTION 3.

Classification Item.	Estimated Quantity.	B	E	F	G	H	K	M	P	R	T	V	W
1	425,600 cu. yds.	$2.70	$3.83	$3.50	$3.00	$2.40	$3.20	$3.15	$3.70	$3.80	$5.59	$3.70	$2.95
2	100 cu. yds.	5.00	10.00	4.00	6.00	4.00	4.00	10.00	7.50	6.00	11.04	4.00	4 00
2a	44,500 cu. yds.	2.70	1.50	3.50	3,00	2.40	1.50	3.15	3.70	2.30	4.72	2.40	4.00
3a	465 ft.	100.00	100.00	100.00	65.00	100.00	30.00	80.00	100.00	100.00	41.40	90.00	100.00
3b		.....	350.00	.....	.....	.....	.....	200.00	140.00	.....	.....	.....	120.00
3c		.....	350.00	.....	.....	.....	.....	250.00	180.00	.....	.....	.....	150.00
4	76,100 cu. yds.	9.00	8.00	10.00	8.50	9.50	9.50	9.65	10.00	10.00	11.37	10.50	8.50
5	1,575 cu. yds.	8.00	7.10	9.00	6.50	16.00	8.50	10.50	8.00	10.00	15.57	7.50	7.00
6	100 cu. yds.	8.00	7.90	5.00	5.50	6.00	4.00	5.00	8.00	11.00	8.62	10.50	7.20
7	190 cu. yds.	15.00	12.00	10.00	15.00	13.50	12.00	18.00	14.00	11.00	16.56	14.00	12.50
8	6,700 cu. yds.	15.00	12.00	10.00	12.00	13.50	12.50	15.00	14.00	11.50	15.56	13.40	12.00
9	1,000 cu. yds.	1.25	.20	.50	1.00	1.00	.20	.40	2.00	.70	.44	.40	.75
10	2 M. ft. B. M.	75.00	60.00	70.00	78.00	60.00	10.00	70.00	80.00	100.00	84.18	50.00	75.00
11	4,650 cu. yds.	2.50	2.40	2.50	2.30	1.75	1.50	2.25	3.00	2.50	2.42	2.25	2.40
12a	19,200 sq. yds.	.75	.76	.35	.50	.12	.15	.35	.75	.65	.87	.45	.64
b	100 sq. yds.	1.00	1.05	.70	.75	.16	.30	.60	.90	1.05	1.12	.65	.91
c	19,175 sq. yds.	1.50	1.45	1.00	1.05	.20	.45	.90	1.10	1.46	1.49	1.00	1.18
d	100 sq. yds.	1.75	1.90	1.20	1.35	.28	.60	1.15	1.40	1.86	1.93	1.25	1.45
e	100 sq. yds.	2.00	2.30	1.50	1.65	.34	.75	1.40	1.50	2.28	2.36	1.50	1.72
f	100 sq. yds.	2.50	2.70	1.80	1.95	.40	.90	1.60	1.75	2.69	2.73	1.75	1.99
13	2,580 cu. yds.	30.00	30.00	30.00	40.00	40.00	25.00	28.00	20 00	12.00	48.30	37.50	27.50
14a	100 lin. ft.	1.75	1.05	1.00	.80	.60	.40	.75	1.40	.56	1.52	.80	.40
b	100 lin. ft.	1.50	.91	1.00	.65	.50	.40	.60	1.15	.39	1.10	.68	.35
c	100 lin. ft.	1.25	.63	.75	.40	.40	.30	.50	.75	.28	.75	.60	30
d	100 lin. ft.	1.00	.38	.75	.25	.30	.25	.40	.50	.20	.58	.50	.25
e	100 lin. ft.	.75	.29	.50	.20	.20	.20	.35	.35	.16	.51	.45	.20
f	0 lin. ft.	.....	1.20	.....	.....	.....	.....	1.25	1.60	.....	1.66	1.50	.75
g	100 lin. ft.	1.50	.89	1.00	1.20	1.20	1.25	1.10	1.20	1.00	1.41	.85	.50
h	100 lin. ft.	1.25	.55	.75	.90	1.00	1.10	1.00	.80	.80	.93	.65	.40
15	771,800 duct ft.	.15	.12	.11	.10	.12	.15	.11	.10	.10	.15	.11	.20
16	2,140 tons	90.00	84.00	80.00	90 00	80.00	80.00	75.00	85.00	95.00	115.30	82.50	89.00
17	3,585 tons	80.00	72.00	75.00	75.00	65.00	70.00	60.00	75.00	94.00	82.80	74.00	79.00
18	1,415 tons	65.00	56.00	50.00	70.00	80.00	55.00	45.00	70.00	55.00	82.80	55.00	60.00
20	10 tons	75.00	80.00	40.00	100.00	70.00	55.00	65.00	70.00	45.00	96.60	100.00	90.00
21	6,380 lbs.	.10	.21	.05	.12	.06	.15	.05	.08	.07	.22	.06	.05
22	14,100 lin. ft.	1.25	.50	.80	.40	1.00	1.30	.12	1.00	1.20	.90	.40	.30
23	13,300 sq. ft.	2.50	2.60	1.50	1.50	1.00	1.50	.75	2.00	.70	1.17	3.00	3.00
24	14,300 sq. ft.	2.00	2.27	1.75	2.00	1.25	1.75	1.63	2.00	2.00	1.93	2.00	2.00
25a	15,800 sq. yds.	3.00	2.50	2.50	4.00	3.00	2.50	1.50	1.25	3.50	2.86	2.00	2.50
b	42,500 sq. yds.	2.00	2.50	1.50	2.00	.75	.60	1.40	2.25	3.50	1.79	.55	1.50
27a	32,250 lin. ft.	.30	.25	.10	.15	.10	.20	.10	.10	.08	.25	.10	.10
b	1,765 lin. ft.	.45	.29	.20	.25	.12	.25	.20	.15	.18	.37	.18	.17
c	920 lin. ft.	.60	.45	.25	.40	.12	.30	.25	.18	.24	.62	.25	.25
d	25,000 lin. ft.	.15	.45	.20	.20	.12	.40	.20	.08	.14	.30	.10	.30
28	1,750 boxes	1.00	1.22	1.50	.80	1.00	10.00	.30	1.50	1.00	7.04	1.00	2.00
29	500 lin. ft.	2.50	1.14	1.00	1.20	1.25	3.00	1.75	1.25	1.50	1.24	1.20	.60
30	9,503 lin. ft.	5.00	3.00	2.50	3.50	.60	1.00	4.00	4.50	2.93	6.47	3.00	3.20
31	2,915 lin. ft.	6.00	3.15	3.00	4.25	.80	1.25	4.50	5.00	2.20	6.80	3.50	3.75
32	1,160 lin. ft.	7.00	3.30	3.50	5.00	1.00	1.75	5.00	5.50	2.60	7.29	3.75	4.25
33	715 lin. ft.	8.00	3.55	3.50	5.50	1.40	2.30	5.50	6.50	3.30	7.56	4.75	4.50
35	28 tons	50.00	60.00	35.00	52.00	50.00	25.00	35.00	38.00	40.60	48.30	39.00	60.00
36	4 tons	100.00	82.00	50.00	91.00	55.00	60.00	60.00	45.00	81.20	99.36	85.00	70.00
37	1,655 lin. ft.	15.00	7.00	5.00	9.00	5.60	3.75	8.00	9.00	3.78	9.60	5.25	9.15
38	1,030 lin. ft.	15.00	7.25	6.00	9.75	5.90	4.50	9.00	9.50	3.74	10.01	5.75	9.60
39	1,215 lin. ft.	16.00	7.50	7.00	10.40	6.20	5.25	10.00	10.00	5.47	11.11	6.25	10.00
41	655 lin. ft.	17.00	8.00	8.00	11.70	6.80	6.85	11.50	13.75	5.59	11.41	7.50	11.00
42	10 lin. ft.	17.00	8.00	8.50	13.00	7.10	6.65	13.00	14.00	5.22	11.72	8.25	11.60
43	25 lin. ft.	18.00	8.50	9.00	13.50	7.40	7.50	14.00	14.50	5.64	12.03	8.75	12.20
44	614 lin. ft.	18.00	8.75	10.00	14.30	7.70	8.50	14.50	15.00	7.05	12.34	9.25	12.75
45	15 lin. ft.	15.00	7.75	4.00	9.00	4.86	3.50	9.00	8.50	3.82	9.67	7.00	8.75
46	490 lin. ft.	18.00	8.30	6.00	10.40	5.60	5.75	10.50	10.00	6.14	12.57	7.00	11.00
50	450 lin. ft.	22.00	9.50	.....	13.00	7.20	8.00	15.00	15.00	8.53	19.21	9.50	16.50
61	128 lin. ft.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
62a	2,900 lin. ft.	10.00	3.00	12.00	4.00	4.00	10.00	6.00	20.00	9.00	6.90	2.50	15.00
62b	0 lin. ft.	.....	5.00	.....	.....	.....	.....	6.00	10.00	.....	.....	.....	15.00
63	19 columns	2,000.00	500.00	100.00	780.00	600.00	800.00	250.00	800.00	1,900.00	2,007.00	1,700.00	2,000.00
64	100 lin. ft	1.00	.80	.50	2.00	.32	.25	.50	.45	.25	.69	.47	.20
65	100 lin. ft	1.25	1.00	.75	2.60	.50	.30	.75	.50	.30	1.03	.47	.25
66	3,400 lin. ft.	1.50	.75	1.50	3.40	.80	.35	1.00	.60	.35	2.03	.57	.30
67	50 lin. ft.	1.75	1.50	2.00	4.00	.98	.40	1.50	.75	.45	2.94	.77	.40
68	2,370 lin. ft.	2.00	1.20	4.00	5.00	1.94	.70	2.00	1.00	.60	3.88	1.13	.60
70	150 lin. ft.	3.00	2.50	4 50	7.00	3.74	1.00	2.50	1.60	1.00	6.00	1.87	1.50
74	150 lin. ft.	1.00	.80	.50	2.00	.35	.25	.60	.45	.20	.69	.57	.20
75	1,550 lin. ft.	1.00	.50	.70	2.60	.50	.30	.75	.50	.25	1.03	.57	.25
76	1,570 lin. ft.	1.25	.60	1.00	3.40	.88	.35	1.00	.60	.30	2.03	.67	.30
77	2,180 lin. ft.	1.50	.75	1.50	4.00	1.10	.40	1.25	.70	.35	2.94	1.00	.40
78	880 lin. ft	1.75	1.00	2.00	4.50	1.60	.60	1.25	.90	.40	3.39	1.13	.50
79	1,785 lin. ft.	2.00	1.20	3.00	5.00	2.14	.70	1.50	1.10	.45	3.88	1.33	.75
80	1,400 lin. ft.	2.25	1.50	3 25	6.00	3.00	.95	2.00	1.50	.75	4.94	1.87	1.00
81	70 lin. ft.	2.50	2.50	3.50	7.00	4.10	1.00	2.50	1.75	1.00	6.00	2.47	1.50
83	94 tons	40.00	30.00	35.00	35.00	30.00	25.00	30.00	38.00	40.60	32.43	30.00	40.00
84	24 tons	70.00	80.00	50.00	78.00	32.00	60.00	60.00	75.00	81.20	71.76	65.00	45.00
91	15,000 duct ft.	.25	.60	.11	.65	.15	.10	.16	.10	.14	.69	.80	1.00

Totals: (B) $3,455,583; (E) $3,575,278; (F) $3,575,485; (G) $3,411,697; (H) *$2,981,992; (K) $3,240,437; (M) $3,311,827; (P) $3,813,727; (R) $3,822,764; (T) $5,066,937; (V) $3,668,568; (W) $3,471,897.

*Lowest bidder.

GRAND TOTAL (Lowest Bidders), ROUTE 9, SECTIONS 1, 2, 3 .... $11,924,359

partly under private property to about the intersection of the easterly line of Mott Ave. with the westerly line of Park Ave.

For Section 14 two plans designed Type H and Type K, respectively, have been prepared.

For Section 14H the bidders are: Behrman & Rodgers; McArthur Bros. Co.; O'Rourke Engineering Construction Co.; S. Pearson & Son, Inc.

For Section 14K the bidders are: Bradley Contracting Co.; McArthur Bros. Co.; Arthur McMullen; O'Rourke Engineering Construction Co.

Section 15—This section consists of two branches. The west branch begins at the end of the west branch of Section 14 and extends thence under East 135th St., private property and Mott Ave., Franz Sigel Park, private property and the several cross streets to a point in private property on the easterly side of River Ave., about 120 ft. south of the south line of East 157th St., with a station at East 138th and 149th St. (The portion of this section north of East 151st St. is part of the River Ave. route adopted by the Commission on June 16, 1908.) The east branch begins at the end of the east branch of Section 14 and extends thence under Park Ave., private property, Canal St., West and East 138th St. to a point in East 138th St., about 150 ft. easterly of the center line of Alexander Ave., with a station between Third and Alexander Aves. The bidders are: Bradley Contracting Co.; Godwin Construction Co.; Haggerty-Drummond Co.; Hugh Nawn Contracting Co.

BROOKLYN.

ROUTE 9—BROADWAY-LAFAYETTE AVE.

Section 1 begins at the Brooklyn terminal of the Williamsburg Bridge, at or near Driggs Ave., and extends thence under the plaza of the Williamsburg Bridge and private property to Broadway at a point near Marcy Ave., thence under Broadway to a point about 160 ft. southeasterly from the center line of Sumner Ave. The bidders are: Bradley Contracting Co.; Frederick L. Cranford; Degnon Contracting Co.; Newman & Carey.

Section 2—In two parts. The first part begins at the end of Section 1, and extends thence under Broadway to a point about midway between Greene Ave. and Lexington Ave. The second part begins at a point near Bushwick Ave. and extends thence westerly under Kossuth Pl. and under the projected subway in Broadway to Lafayette Ave., and thence westerly under Lafayette Ave. to a point about 620 ft. easterly from the center line of Tompkins Ave. The bidders are: Bradley Contracting Co.; Degnon Contracting Co.; Patrick McGovern; Hugh Nawn Contracting Co.; Newman & Carey.

Section 3 begins at the end of the second part of Section 2, and extends thence westerly under Lafayette Ave. to Fulton St.; and thence under Fulton St. to a point at or near Ashland Pl., where a connection can be made with a subway now under construction. The bidders are: Bradley Contracting Co.; Creamer, Cranford & Donovan; Oscar Daniels Co.; Degnon Contracting Co.; Walter H. Gahagan; James H. Holmes; Patrick McGovern; Hugh Nawn Contracting Co.; Newman & Carey; S. Pearson & Son, Inc.; Smith & Pennock Contracting Co.; Smith, Scott, Hannan & Hickey.

ROUTE 20—CANAL ST.

Section 1—Beginning at a point in Watts St., Borough of Manhattan, about 8 ft. east of the east building line of West St., and extending thence northeasterly under and along Watts St. to Canal St. and thence easterly under and along Canal St. to a point about 75 ft. east of the northeast corner of West Broadway. The bidders are: Bradley Contracting Co.; Metropolitan Contracting Co.

Section 2, in two parts. The first part beginning at a point under Canal St., in the Brough of Manhattan, about 75 ft. east of the northeast corner of West Broadway, and extending thence easterly under and along Canal St. to a point about 47 ft. west of the northwest corner of Broadway. The second part beginning at a point under Canal St. about 27 ft. east of the northeast corner of Broadway, and extending thence under and along Canal St. and under the existing subway in Lafayette St. and Centre St. to a point about 40 ft. east of the east building line of the Bowery. The bidder is Bradley Contracting Co.

CANAL STREET,

ROUTE 20—SECTION 1.

Classification Item.	Estimated Quantities.	A	O
1	30,600 cu. yds.	$4.50	$8.50
2	150,700 cu. yds.	20.00	8.50
2a	1,330 cu. yds.	5.00	3.00
3a	3,685 ft.	400.00	500.00
b	75 ft.	500.00	500.00
c	0 ft.	.....	750.00
4	25,600 cu. yds.	10.00	11.25
5	3,150 cu. yds.	9.00	10.00
7	100 cu. yds.	15.00	20.00
8	1,780 cu. yds.	15.00	14.25
9	1,000 lin. ft.	1.25	1.50
10	2 M. ft. B. M.	75.00	75.00
12a	41,800 sq. yds.	.75	.40
b	100 sq. yds.	1.00	.60
c	100 sq. yds.	1.50	.85
d	100 sq. yds.	1.75	1.10
e	100 sq. yds.	2.00	1.36
f	100 sq. yds.	2.50	1.60
13	6,700 cu. yds.	30.00	28.75
14a	100 lin. ft.	1.75	.75
b	100 lin. ft.	1.50	.65
c	0 lin. ft.	.....	.50
d	0 lin. ft	.....	.40
e	200 lin. ft.	.75	.35
f	0 lin. ft.	....	1.25
g	0 lin. ft.	....	1.00
h	0 lin. ft.	....	.75
15	58,900 duct ft.	.15	.10
16	4,980 tons	90.00	75.00
17	1,560 tons	80.00	65.00
18	160 tons	65.00	50.00
20	5 tons	75.00	60.00
21	6,600 lbs.	.10	.05
22	1,100 lin. ft.	.25	.15
23	1,800 sq. ft.	[illegible]	1.00
24	930 sq. ft	[illegible]	1.60
25a	1,700 sq. yds.	[illegible]	2.50
b	11,680 sq. yds.	[illegible]	2.00
27a	10,000 lin. ft.	.30	.10
b	475 lin. ft.	.45	.15
c	260 lin. ft	.60	.20
d	4,400 lin. ft.	.15	.15
28	315 boxes	[illegible]	.25
29	375 lin. ft.	[illegible]	1.50
30	30 lin. ft.	[illegible]	....
31	485 lin. ft.	[illegible]	....
37	15 lin. ft.	[illegible]	....
39	40 lin. ft.	[illegible]	....
40	40 lin. ft.	[illegible]	....
46	75 lin. ft.	[illegible]	....
49	25 lin. ft.	[illegible]	....
53	325 lin. ft.	[illegible]	21.85
55	100 lin. ft.	[illegible]	....
56	40 lin. ft.	[illegible]	....
57	397 lin. ft.	[illegible]	....
58	172 lin. ft.	[illegible]	....
59	610 lin. ft.	[illegible]	....
62a	3,920 lin. ft.	[illegible]	15.00
b	2,300 lin. ft.	[illegible]	10.00
63	8 columns	[illegible]	[illegible]
64	100 lin. ft.	[illegible]	.75
65	100 lin. ft.	[illegible]	.75
66	200 lin. ft.	[illegible]	1.00
68	120 lin. ft.	[illegible]	1.50
69	120 lin. ft.	[illegible]	2.00
75	120 lin. ft.	[illegible]	.75
76	360 lin. ft.	[illegible]	1.00
77	120 lin. ft.	[illegible]	1.60
79	240 lin. ft.	[illegible]	1.50
80	120 lin. ft.	[illegible]	2.00
83	3 tons	[illegible]	35.00
84	9 tons	[illegible]	70.00
85	100 lin. ft.	[illegible]	1.25
86	240 lin. ft.	[illegible]	2.50
89	5 tons	[illegible]	35.00
90	3 tons	[illegible]	100.00
91	2,000 duct ft.	.25	[illegible]

Totals—(A) $5,979,657; *(O) $[illegible]1,644.

*Lowest Bidder.

CANAL STREET,

ROUTE 20—SECTION 2

Classification Item.	Estimated Quantities.	B
1	82,700 cu. yds.	$4.50
2	182,500 cu. yds.	20.00
2a	8,110 cu. yds.	5.00
3a	7,746 ft.	400.00
b	376 ft.	500.00
c	0 ft.	....
4	42,950 cu. yds.	10.00
5	4,520 cu. yds.	9.00
7	75 cu. yds.	15.00
8	2,190 cu. yds.	15.00
9	1,000 lin. ft.	1.25
10	2 M. ft. B. M.	75.00
11	573 cu. yds.	2.50
12a	52,200 sq. yds.	.75
b	100 sq. yds.	1.00
c	1,285 sq. yds.	1.50
d	100 sq. yds.	1.75
e	100 sq. yds.	2.00
f	100 sq. yds.	2.50
13	8,230 cu. yds.	30.00
14a	100 lin. ft.	1.75
b	100 lin. ft.	1.50
c	0 lin. ft.	....
d	0 lin. ft.	....
e	200 lin. ft.	.75
f	0 lin. ft.	....
g	0 lin. ft.	....
h	0 lin. ft.	....
15	131,560 duct ft.	.15
16	7,493 tons	90.00
17	1,740 tons	80.00
18	160 tons	65.00
20	5 tons	75.00
21	12,000 lbs.	.10
22	2,675 lin. ft.	1.25
23	188 sq. ft.	2.50
24	242 sq. ft.	2.00
25a	3,705 sq. yds.	5.00
b	13,960 sq. yds.	3.00
27a	13,817 lin. ft.	.30
b	690 lin. ft.	.45
c	373 lin. ft.	.60
d	4,320 lin. ft.	.15
28	540 boxes	1.00
29	15 lin. ft.	2.50
31	410 lin. ft.	6.00
32	60 lin. ft.	....
35	73 tons	50.00
36	12 tons	100.00
37	250 lin. ft.	....
39	177 lin. ft.	....
40	36 lin. ft.	16.00
42	90 lin. ft.	....
50	260 lin. ft.	....
51	275 lin. ft.	....
52	250 lin. ft.	....
54	36 lin. ft.	32.00
55	138 lin. ft.	....
62a	3,375 lin. ft.	18.00
b	2,820 lin. ft.	5.00
63	4 columns	2,000.00
64	100 lin. ft.	1.00
65	100 lin. ft.	1.25
66	140 lin. ft.	1.50
68	230 lin. ft.	2.00
69	72 lin. ft	2.50
70	350 lin. ft.	3.00
75	240 lin. ft.	1.00
76	100 lin. ft.	1.25
77	280 lin. ft	1.50
78	350 lin. ft.	1.75
79	260 lin. ft	2.00
80	270 lin. ft	2.25
81	420 lin. ft	2.50
83	27 tons	40.00
84	7 tons	70.00
85	100 lin. ft	2.50
86	170 lin. ft	3.00
87	350 lin. ft.	4.00
88	70 lin. ft	5.00
89	16 tons	35.00
90	4 tons	70.00
91	5,000 duct ft.	.25
Total		*$9,164,909

*Lowest Bidder.

GRAND TOTAL (Lowest Bidders) Route 20, Sections 1 and 2, $13,7[illegible]554.

CURRENT PRICES OF ENGINEERING MATERIALS

Supplement to ENGINEERING NEWS, appearing in the First Issue of Each Month. New York, November 3, 1910.

PRICE CHANGES AND THE BUSINESS OUTLOOK.

A distinct improvement is shown in sentiment. Little tangible results, however, have appeared from this, but it is noteworthy that materials now being ordered are for prompt shipment. As far as materials of engineering construction are concerned there have been no wide price changes. No large orders have appeared that would justify manufacturers in cutting prices. Commodity prices have been remarkably reduced and out of fourteen leading commodities consumed daily, five of them reached the low record for the year during October and three during the month of September.

The iron industry shows some betterment, chiefly in the inquiries received. There has been considerable buying of pig iron for next year's delivery. The railways of the country are testing the market for equipment and specifications have been received for rails for 1911. It is significant that while some of the railways have ordered material for prompt shipment, others have placed their orders with the distinct understanding that nothing should be published regarding them.

The modern theory of economics—Cooperation, not competition—was given a further boost last month by the head of the foremost industrial organization of the world. A range of world-wide inflated values for iron and steel products may be very satisfactory for the makers of steel, but it will lead to the creation of a productive capacity far in excess of even boom time requirements. It is perfectly natural, however, after having carried out such a policy in one country to wish to spread it all over the world.

The poverty of the country's railways is no longer the principal topic of discussion. One of the weakest trunk lines of the country, a road that was only snatched from the receiver's hands less than three years ago, reports last year's net earnings as the largest in its history. The great Union Pacific, which has built up an empire, reports net earnings under a conservative management greater than ever before. The [illegible]ber of idle cars on the tracks of American railways has been rapidly reduced and probably by this time the surplus has entirely disappeared and a shortage exists.

Business is active enough to absorb all of the common labor available and trainmen and station help for railways are becoming difficult to obtain. Machinists are more plentiful on account of the slowing down in the automobile industry, yet the shops of several important railways are running short-handed owing to the inability to secure competent lathe and bench hands.

A feature of much importance has been a slight improvement in the demand for high-grade securities. The absorbing power of the investing public, however, is limited and banking interests are attempting to limit the proposed sale of New York City bonds to the smallest possible figure.

The bids for the new Tri-Borough Subway in New York City brought out the fact that twenty-three contractors were anxious to undertake this work as principals. Only one contractor, however, entered a bid for all sections of the three routes. Railroad construction in the middle West shows an improvement, definite work having been started on several important projects. Some of these have been held in abeyance for several months.

The electrical industry continues to improve. The demand for copper is larger and the leading manufacturers of electrical machinery have more orders on their books than ever before. In Europe the electrical industry is especially active. In the machine tool line, business is fairly satisfactory, notwithstanding the fact that the automobile manufacturers are practically out of the market as far as new equipment is concerned.

The price of rubber is steadily declining and is now 40% lower than the high figures reached early in the year.

LABOR.

While the demand for common labor is not as insistent as it was, there is still a job awaiting an able-bodied man willing to do rough work. The wage is practically unchanged, good Italian labor demanding $1.65 to $1.70, while other foreigners are paid $1.50 to $1.65. Outside American labor can command $1.75 as handy men rather than laborers. The call for factory help is greater, particularly unskilled help. For the first time this year machine shop help is more plentiful. In fact, there are a good many men calling themselves machinists out of work on account of the depression in the automobile industry. Good machinists, however, can secure positions readily. In New York and vicinity workmen in the building trades are in excess of the demand and hoisting engineers are especially plentiful. They will not leave New York, however, and one employment agency tells of its inability to secure a hoisting engineer for work outside the City at regular city wages. Tunnel workers are wanted by the contractors on the Ashokan Reservoir and miners for the West are in brisk demand. Practically every railroad contractor in the Middle West could use anywhere from 50 to 200 additional men.

Small strikes have been of frequent occurrence. That the labor unrest is not a condition peculiar to this country was forcibly brought out by the recent French Railway strike. This strike succeeded in tying up some important railways in France, demoralizing business and creating a great deal of violence. It likewise offered an excuse for unscrupulous agitators, or perhaps anarchists, to perpetrate many acts of violence. The settlement of the strike was brought about by the loss of popular sympathy, owing to the paralyzing of many industries. In fact, the strike may be said to have burned itself out. The employees on the Pennsylvania are not satisfied. A strike has been called on a small New Jersey trolley line. That was settled by raising the wages, but at the same time the union was not recognized. Shop hands on the Illinois Central and the Missouri Pacific have gone out. Machinists of the Baltimore and Ohio and Ohio Southwestern railroads, who went on strike about a year ago, will be reinstated, according to an agreement reached recently.

Returns have been received by the New York State Department of Labor from 100 trade unions throughout the State with a total membership of beween 90,000 and 100,000, or nearly one-fourth of the organized wage earners in the State. At the end of January the percentage of members reported idle was 24.5. The percentage declined in the following months until it stood for the end of June at 15.4, with an average percentage for the six months of 19.2 These figures are two to three points lower than those for the corresponding period of 1909.

CEMENT, LIME AND BRICK.

PORTLAND CEMENT.—Business is excellent. Contractors are working to close up the season's work and in many instances will be able to do a great deal more work this year than they had planned, owing to the unusually favorable weather. This, perhaps, has been as an important a factor in the use of cement and kindred products in the vicinity of New York recently as anything else. The most important thing in the cement trade last month was the announcement that Mr. John R. Morron had been elected President of the Atlas Cement Co. This is taken to mean that the Atlas Cement Co. is now under the control of the banking firm of J. P. Morgan & Co., or closely allied to the U. S. Steel Corporation, which controls the Universal Portland Cement Co. This undoubtedly means that there will be a closer working agreement among the large producers of cement, but there are too many mills in the country to permit the formation at this time of what has been called by the yellow press a cement trust. The mills on the Pacific Coast are getting into better shape and within a couple of years will probably be able to supply the demand there. In the Southwestern country prices are firm. The following quotations are named at the various cities: Boston, $1.62; Buffalo, N. Y., $1.60; New York, $1.53; Philadelphia, $1.50, and Atlanta, Ga., $1.35 net. On the Pacific Coast, $2.20 to $2.50 per bbl. is named. Eastern prices represent a quotation of about 90 cts. per bbl. in bulk at the mill.

Imported cement is in light demand at $2.42 for Alsen's and $2.43 for Dyckerhoff's.

NATURAL CEMENT.—The same quickening in the demand, which is noted in the Portland cement field, has been felt by the manufacturers of natural cement. They are, however, abundantly able to supply the needs of the trade at this time. The price is unchanged at 80 cts. per bbl. in New York, and $1.65 per bbl. in Boston.

LIME.—Manufacturers of lime report business active. There is no difficulty about securing prompt shipments, especially in the New York territory. The following prices are for lots of 500 bbls., delivered in New York City: State common, per bbl., 75 cts.; Rockland-Rockport common, 92 cts.; Rockland-Rockport special, 300 lbs., $1.37; finished, 300 lbs., $1.47; finishing, 200 lbs., $1.02, and 350 lbs., $1.62; New Milford, $1.30.

Hydrated lime is sold at $9.00 per ton.

Adamant wall plaster is $6.00 per ton, delivered in New York harbor.

BRICK.—Practically all the machine plants on the Hudson River have closed down for the season. The demand for brick this year has been disappointing, but the makers had nearly all the business they could take care of. Prices, however, have been low and a good deal of complaint has been made regarding the unsatisfactory profits.

Prices are advanced slightly. Hudson River brick being quoted at $5.25 to $5.62½, and Raritan River brick at $5.25 to $5.50. The Boston prices are $7.00 for delivery, from yard, and in Newark, N. J., the price is $6.75.

White enameled brick are held at the unchanged price of $60 per thousand for the American size (8¾ × 2¼ in. enameled surface by 4⅛-in. bed), and $70 to $75 for the English size (9 × 3-in. enameled surface by 4½-in. bed). These prices are f. o. b. Perth Amboy.

PLASTER BLOCKS.—For large lots prices are as follows:

	Weight. lbs. per sq. ft.	Price cts. per sq. ft.
2-in.	7	6
3-in.	8½	6½
4-in.	11	7¼

These blocks are made 32-in. long by 13½-in. wide, containing 3 sq. ft. of surface. The 2-in. blocks are solid, but the others are hollow.

Plaster boards ⅝-in. thick are 16 cts. per sq. yd.

STONE.

BLUESTONE.—The principal demand during the last month has been for curbing. This has been so large that sellers of stone have not been able to supply their customers with the promptness desired. In other forms of bluestone, with the exception of flagging, the inquiry is large and in quite a few instances contractors have been urging that deliveries be made more promptly.

For delivery, either alongside of dock or f. o. b. cars New York City, quotations are as follows: Flagging, 6 cts. per sq. ft. per in. of thickness; flagging, 2½ to 3-in. thick that will pass New York City specifications, 18 to 19 cts. per sq. ft. Some concessions, however, have been made and stone of this character has sold at 17 cts.

Sewer bottoms 5 ft. sq. and 3-in. thick are sold at 25 cts. per sq. ft. Curbing, 5 × 16-in., is 40 cts. and 5 × 24-in. by 5-in. thick is 60 cts., and 6-in. thick is 65 to 70 cts. per lin. ft., 5 × 20-in. by 5-in. thick is 50 cts.

Promiscuous shapes of building and foundation stone sell at 70 to 75 cts. per sq. ft.

GRANITE.—A better demand for granite has been noted in the last fortnight. Prices are firm at 40 to 45 cts. per cu. ft. for promiscuous shapes or run of quarry.

Pink Milford granite is unchanged at $1.00 per cu. ft. for promiscuous shapes.

LIMESTONE.—While an improvement has been noted in the demand for all kinds of limestone, still the activity is nothing remarkable, chiefly because of the slowing down of building work in New York City.

Prices are unchanged at 85 cts. per cu. ft., delivered alongside of dock, New York. Dressed stone is quoted at $1.25 to $1.50 per cu. ft.

Sandstone in the rough is 80 cts. to $1.00 per cu. ft.

INTERIOR STONE.—Slate flooring, 1-in. thick, can be had at 20 cts. per sq. ft. for the common or ribbed variety. Clear black sells at 35 to 40 cts., and the same price is asked for Vermont. A combination of slate and marble flooring is 30 cts. per sq. ft.

Marble floor, finished ready to lay, of Vermont marble, is 50 to 70 cts. per sq. ft.; Italian marble, 70 to 90 cts. Tennessee marble can be had at 65 cts. Ordinary stair work, such as slate steps, are quoted at 24 cts. per sq. ft.

CRUSHED STONE, SAND AND GRAVEL.

CRUSHED STONE.—More business has been transacted during the last fortnight than in any month this year. While it is natural for stone dealers to experience a sudden call for stone at the close of the season, this year the demand has been unusual. The smaller dealers are unable to make their shipments with the promptness desired and have turned to the larger dealers, who were unable to aid them on account of the large volume of business on their own books. Most of the business has been shipments on old contracts, but some new contracts have been made and the outlook is good for activity during the rest of the season. Prices are unchanged from last month, as follows:

For 1½-in. stone, 90 cts. to $1.00 a yd. is quoted; ¾-in. stone, 95 cts. to $1.10, and screenings are also sold at 95 cts. to $1.10. These prices are for full cargo lots of 500 cu. yds. delivered alongside of dock, New York City.

In Boston, 90 cts. is quoted for ¾-in., 75 cts. for 1½-in., and 65 cts. for 2½-in., all per net ton. Atlanta, Ga., $1.15 to $1.20 per net ton.

SAND.—An excellent demand for sand is felt and while the dealers in sand have not experienced the rush of work that has characterized the crushed stone industry, they have been pushed to make deliveries. Prices continue without change, washed sand from Long Island being quoted at 35 cts. per cu. yd. White quartz sand is 60 cts. per cu. yd., and white quartz grit, 75 cts. per cu. yd. All of these prices are for delivery alongside of dock, New York, and for full cargo lots of 500 yds. At Atlanta, Ga., the price is $1.30 to $1.50 per net ton.

GRAVEL.—The supply of gravel is adequate to meet the demand, but the inquiry has greatly improved during the last month. Considerable large work is contemplated during 1911. Prices are as follows: The best grades of washed gravel can be obtained at 75 cts. to 85 cts. per cu. yd. These prices are for full cargo lots of 500 yds., delivered alongside of dock, New York City.

White quartz roofing gravel is $1.25 to $1.35 per net ton.

IRON AND STEEL.

PIG IRON.—Some progress was made toward improved conditions in the pig iron market during October. Numerous contracts were entered into for iron to be shipped in the near future, but all of this business was taken at fairly low prices, yet there was no disposition on the part of blast furnace interests to cut under the low figures established in September. In steel making iron, business was slightly better, but there is a large accumulation of unsold iron. As far as foundry irons are concerned, there is little that is new. A leading radiator manufacturer bought a fairly large tonnage and a cast-iron pipe interest replenished its stock. In the Southern iron making field the blast furnace interests are more hopeful, for they see little likelihood of the price declining farther.

The earning of the U. S. Steel Corporation for the third quarter of the year were not as unsatisfactory as had been feared. The unfilled orders on the books of the corporation, however, were the lowest of any time since its organization if the additional producing capacity is taken into consideration.

Price changes, as stated, have been unimportant. For lots of 100 gross tons and over f. o. b. points named quotations are as follows: Cincinnati, Southern foundry No. 1, $14.75 to $15.25; Southern foundry No. 2, $14.25 to $14.75; Southern foundry No. 4, $13.50 to $14. In Philadelphia, Eastern Pennsylvania No. 2 foundry is $15.75 to $16; Eastern Pennsylvania No. 2 plain, $15.25 to $15.50. In Chicago, Northern foundry No. 2 is $16.00 to $16.50; Southern foundry No. 2, $15.35 to $15.85. In Pittsburg prices are only nominal with Bessemer held at $15.90 and basic at $13.90, including the 90 ct. freight rate from the Valley. In New York, Northern foundry No. 2X is $15.25 to $15.75; Southern foundry No. 2, $15.25 to $15.50. In Birmingham, Southern No. 2 has been sold at $11 for delivery this year, but all business thus far taken for 1911 delivery $11.50 has been the minimum.

STEEL RAILS.—Several orders of fair size have been placed by the railways for rails, but with the distinct understanding that no mention be made of it. It is an open secret that some Western roads are in urgent need of supplies and have funds to pay for them, but having put forward the plea of poverty are unwilling to recede from this position. It has been intimated, however, that large orders for rails will probably be released in the near future. Several orders for rails for export have been taken during the last month.

Quotations are without change, the following prices being named for lots of 500 tons and over, carload lots being held at 50 cts. a ton additional; these quotations are f. o. b. mill: Standard sections, 50 to 100-lb., $28; 40 to 45-lb., $27; 30 to 35-lb., $27.50 to $28.50; 20 to 25-lb., $27.25 to $28.25; 12 to 14-lb., $29; 8 to 10-lb., $32. Relaying rails are slightly firmer in New York at $20.50 to $21.50, but in Chicago they are unchanged at $24 to $25.

TRACK SUPPLIES.—Business in the line of track supplies has shown quite a little improvement. One of the Southwestern roads, which held up shipments last Summer, on a large tonnage of rails and track fastenings, has recently given specifications for the shipment of this suspended tonnage. Some Eastern roads have likewise entered in the market and purchased sparingly.

Prices are as follows: Standard railway spikes, 4½ × 9/16 in. and larger, are 1.50 to 1.60 cts. per lb. Boat spikes and small railway spikes are 1.60 to 1.65 cts. Track bolts with square nuts are 2.40 to 2.50 cts. per lb., and angle bars, 1.50 to 1.65 cts. per lb. in Chicago and Pittsburg.

STUCTURAL SHAPES.—The Philadelphia and Reading R. R. has let contracts for the steel work on the Philadelphia track elevation. Numerous building projects are contemplated in all parts of the country which will call for large amounts of steel, but most of these jobs are comparatively small. The track elevation in Chicago will not come for some time and the same may be said of the grade crossing eliminations in several cities of Ohio. The New York Central is urging deliveries on the steel for the Grand Central Terminal and several highway projects have been contracted for in connections with the Barge Canal work in New York. The Long Island has let about 12,000 tons. Some of the railways have asked for bids on cars and others have given orders to have cars built in their own shops.

Prices are without change. The following quotations are named in cts. per lb. f. o. b. Pittsburg: I-beams and channels, 3 to 15-in., 1.40 to 1.45 cts.; over 15-in., 1.55 cts.; H-beams, over 8-in., 1.65; angles, 3 to 6-in., inclusive, 1.50 cts.; angles over 6-in., 1.55 cts.; zees, 3-in. and over, 1.50 cts.; angles, channels and zees under 3-in., 1.45 base and full extras; deck beams and bulb angles, 1.75 cts.; hand rail tees, checkered and corrugated plates, 2.75 cts.

Chicago store prices in cents per lb. are as follows: Angles, 3 to 6-in., 1.80 to 1.90 cts.; over 6-in., 1.90 to 2 cts.; I-beams and channels, 1.80 to 1.90 cts. In San Francisco prices from store continue without change at 2.70 cts. base.

CAST-IRON PIPE.—The market is very inactive and prices are from $1 to $2 lower in all markets, but owing to the absence of business there has been nothing to test the real strength of the market. Some figures as low as $18 per ton have been named on heavy pipe work. It is a noticeable fact that the cast-iron pipe makers are aggressively seeking business in all quarters. Prices are as follows per net ton at the points named: In Birmingham, Ala., 4 to 6-in., $21 to $21.50; 8 to 12-in., $20.50 to $21; over 12-in., $20.

In Chicago, 4-in., $27; 6 to 12-in., $26; 16-in. and larger, $25.

In New York, 6-in., $23.50 to $24.

Gas pipe is usually held at an advance of $1 per ton over the figure quoted on the lightest pipe.

Specials are sold at $50 to $60 per net ton.

OLD MATERIALS.—Business shows some improvement, but mostly in spots. The inquiry, however, is decidedly better and some improvement in the price has been noted, but there has been no broad or general demand for scrap. Scrap dealers who have been unable to secure all the material needed of one grade have found it comparatively easy to substitute other grades at only slight concessions in price. In New York there has been a very good inquiry for heavy melting steel scrap. Old car wheels, which have been entirely friendless for several months, have picked up considerably. Another sale of Panama scrap, amounting to 1,000 tons, went at $9.36 f. o. b. cars. The last sale went at $10.61. Prices in New York are as follows: Re-rolling rails, $13 to $13.25, an advance of $1 compared with last month; heavy melting steel scrap, $12 to $12.25, an advance of 50 cts.; No. 1 yard wrought, $12 to $13; No. 1 railroad wrought, $14.50 to $15; pipes and flues, $11 to $11.50; cast borings, $7 to $7.50; machinery cast, broken up, $13 to $13.50; stove plates, $10 to $10.50.

In Chicago, the market is dull with practically no price changes. The following quotations are per gross ton: Re-rolling rails, $15.25 to $15.75; heavy melting steel scrap, $12.25 to $12.75; shovelling steel, $11.75 to $12.25. For such materials as are sold by the net ton, prices are as follows: Miscellaneous railroad wrought, $10.75 to $12.25; machine shop turnings, $4.75 to $5.25; No. 1 cast scrap, $12.50 to $13; pipes and flues, $9 to $9.50; railroad malleable, $11 to $11.50; agricultural malleable, $10.50 to $11.

In Pittsburg, the market has advanced from 25 to 50 cts. a ton and the inquiry shows some improvement. Quotations per gross ton are as follows: Re-rolling rails, $15.75 to $16; No. 1 foundry cast, $13.75 to $14; No. 2 foundry cast, $12.75 to $13; old grate bars, $12 to $12.25; car wheels, $14.25 to $14.75; cast borings, $8 to $8.25; machine shop turnings, $8.50 to $8.75; bundled steel scrap, $10 to $10.25.

PLATES.—Some improvement is noted in the demand for plates and it is expected that this will continue as a few of the Eastern railways have asked for bids on cars and the showing made in the report of the Car Association would indicate a shortage of cars by the time the next report is issued. One road has already asked for tenders on materials to built 500 cars in its own shops. Rollers of plates are also figuring on 10,000 to 11,000 tons for battleships and about 2,500 tons for torpedo boats.

Prices are unchanged at 1.40 cts. base for wide plates, although some narrow plates have been sold on a basis of 1.35. Plates ¼-in. thick, 6¼ to 100 ins. wide, 1.40 to 1.45 cts; ¼ to 3/16-in. thick, 1.50 to 1.55 cts.; 3-/16-in. and thinner, including No. 8 gage, 1.55 to 1.65 cts.; Nos. 8, 9 and 10 gage, 1.70 to 1.75 cts. All these prices are per lb. f. o. b. mill.

In Chicago store prices are 1.85 to 1.95 cts.

STEEL CASTINGS.—Business is slightly better than last month and prices are somewhat steadier. Open hearth steel castings, weighing from 100 to 500 lbs., are 3½ to 5 cts. per lb. Crucible castings, weighing from 100 to 500 lbs., are 7½ to 9 cts. per lb.

RIVETS.—Specifications on old contracts are fair, but new business is light. Prices are unchanged, as follows: Structural rivets, ¾-in. and larger, 1.90 cts., base cone head boiler rivets, ¾-in. and larger, 2 cts., base; ⅝-in. and 11/16-in. take an advance of 15 cts., and ½-in. and 9/16-in. take an advance of 50 cts. Lengths shorter than 1-in. also take an advance of 50 cts. Terms are 30 days, net cash, f. o. b. mill.

PILING, SHEET STEEL.—The second largest order for sheet steel piling ever taken was booked this month by the Lackawanna Steel Co. and consisted of 6,000 tons of steel piling, to be used in raising the battleship "Maine" in Havana Harbor. For small lots, the general price is 1.60 cts. per lb. f. o b. Pittsburg.

CASTINGS, GREY IRON.—The foundries have not as much business as they had a month ago and some of them would be willing to take a large contract at concessions from the figures recently ruling. Building castings can be obtained at 1¾ to 2 cts. per lb. Some orders, however, have been placed as low as 1⅝ cts. Stair work is 2 to 2½ cts. per lb. Heavy footings, manhole covers and street castings are 1½ to 1¾ cts. per lb.

FREIGHT RATES.—The freight rates, on finished steel products, from the Pittsburg district, including plates, structural shapes, merchant steel and iron bars, pipe, fittings, plain and galvanized wire, nails, rivets, spikes and bolts (in kegs), black sheets (except planished), chain, etc., are as follows, in cts. per 100 lbs.: Albany, 16; Buffalo, 11; Boston, 18; Baltimore, 14½; Canandaigua, 13½; Cleveland, 10; Columbus, 12; Cincinnati, 15; Chicago, 18; Harrisburg, 14½; Louisville, 18; New York, 16; Norfolk, 20; Philadelphia, 15; Rochester, 11½; Richmond, 20; Scranton, 15; St. Louis, 23; Washington, 14½.

WIRE ROPE.—Prices are unchanged from last month. The discount to the larger trade being 42½ and 5% from list for galvanized, and 50 and 5% from list for bright. The net prices of bright wire rope are as follows:

Diameter, inches.	Price per foot Cast steel.	 Crucible steel.	 Plow steel.
2¾	$1.05	$1.24	$1.46
2½	.85	1.05	1.22
2	.57	.65	.76
1¾	.44	.54	.64
1½	.32	.39	.45
1¼	.23	.28	.32
1	.15	.18	.21
¾	.10	.11	.13
⅝	.07	.09	.10
½	.06	.07	.07

ROOFING, CORRUGATED.—The demand for corrugated sheets is steady and perhaps somewhat larger than a month ago. The Western mills have considerably more business than Eastern sellers.

Quotations are as follows for 100 sq. ft. of roof surface: Carloads, Pittsburg, No. 28 painted, $1.55 to $1.60; No. 28 galvanized, $2.80 to $2.85. From store, New York, No. 24 painted, $3.65; No. 24 galvanized $4.60; No. 26 painted, $2.75; No. 26 galvanized, $3.80; No. 28 painted, $2.40; No. 28 galvanized, $3.55.

SHEETS.—The American Sheet & Tin Plate Co. is operating about 80% of its capacity. This is larger than last month and the volume of new business coming in is fairly satisfactory. Prices are firm and little is heard of any concessions in price. Quotations ruling last month are repeated as follows:

	Cts. per lb. Black.	 Galvanized.
Nos. 15 & 16	1.90 to 1.95	2.50
Nos. 17 to 21	1.95 to 2.00	2.65
Nos. 22 & 24	2.00 to 2.05	2.85
Nos. 25 & 26	2.05 to 2.10	2.95 to 3.00
No. 27	2.10 to 2.15	3.05 to 3.10
No. 28	2.15 to 2.20	3.20 to 3.25
No. 29	2.20 to 2.25	3.40 to 3.45
No. 30	2.30 to 2.35	3.60 to 3.65

Store prices Chicago are as follows:

	Cts. per lb. Black.	 Galvanized.
No. 10	2.40	2.95
No. 12	2.40	
No. 14	2.45	
No. 16	2.55	3.05
Nos. 18 to 22	2.70	3.20
No. 24	2.75	3.30
No. 26	2.85	3.50
No. 27	2.95	3.65
No. 28	3.15	3.80
No. 30	3.35	4.25

MERCHANT PIPE.—A cut in price brought quite a little new business. It is rather unusual for pipe makers to book many orders during the last quarter of the year, but all of the mills have secured some good business within the last month. Jobbers have purchased freely as their stocks were low. The price changes that went into effect early in October are represented by the following discounts:

	Black.	Galvanized.
¾ to 1½-in. Butt Weld	79	69
2-in. Lap weld	76	66
2½ to 4-in. Lap weld	78	66
4½ to 12-in. Lap weld	77	67

At these discounts the net prices of pipe per ft. are as follows:

	Steel Pipe in Cts. per ft. f. o. b. Mill. Black.	 Galvanized.
¾-inch	2.43	3.58
1 -inch	3.47	5.12
1¼-inch	4.74	7.00
1½-inch	5.69	8.35
2 -inch	8.65	12.20
2½-inch	12.70	19.80
3 -inch	16.60	25.60
4 -inch	23.70	36.70
5 -inch	33.40	48.00
6 -inch	43.20	62.00
7 -inch	54.00	78.00
8 -inch	65.00	93.00
9 -inch	78.00	112.00
10 -inch	92.00	132.00
11 -inch	104.00	149.00
12 -inch	114.00	162.00

TIN PLATE.—Specifications against old contracts are heavy and the leading interest, which is operating about 85% of capacity, is doing the largest business in its history. The tin plate trade seems to increase whether the demand for steel shows any improvement or not. Prices are firm, but there are neither premiums for prompt delivery nor price cutting for desirable orders.

Terne plates or tin plates used for roofing purposes are sold by the box of 112 sheets. Store prices in New York are without change at $8.50 per box for 20 × 28-in. I C plates with an 8-lb. coating; plates of the same size with a 15-lb. coating are $10.40; 20-lb. coating, $13 and 40-lb. coating, $16.50.

COKE.—An increase is noted in the output of coke, amounting to 50,000 tons weekly. The "Connellsville Courier" figures the output of coke in the upper and lower Connellsville region as 351,000 tons weekly. A feature of the month is the sale of a round tonnage of furnace coke for November delivery at $1.55. This is the low price of the year. The best grades of furnace running under 1% in sulphur are sold at $1.70 to $1.80 per ton at oven on contracts running through 1911.

Foundry coke shows a slight improvement, the best grade of 72-hr. foundry being quoted at $2.15 to $2.25 for prompt shipment and $2.25 to $2.50 for delivery during 1911.

BARS AND MERCHANT SHAPES.—The demand is reasonable. Prices are steady and firm, the following being named from New York store:

	Cts. per lb.
1 to 1⅜-in. round and square	1.90
1½ to 4-in. × ⅜ to 1-in.	1.90
1½ to 4-in. × ¼ to 5/16-in.	2.10
Rods—⅝ and 11/16 round & square	2.10
Angles:	
3-in. × ¼-in. and larger	2.10
3-in. × 3/16-in. and ⅛-in.	2.35
1½ to 2½-in. × ⅛-in.	2.35
1½ to 2¾-in. × 3/16-in. & thicker	2.10
1 to 1¼ × 3/16-in.	2.20
⅞ × ⅛-in.	2.40
¾ × ⅛-in.	2.50
⅝ × ⅛-in.	3.55
½ × 3/32-in.	4.35
Tees:	
1-in.	2.65
1¼-in.	2.45
1½ × 2½ × ¼-in.	2.15
1½ × 2½ × 3/16-in.	2.35
3-in. and larger	2.15
Beams	2.10
Channels, 3-in. and larger	2.10
Bands—1½ to 6 × 3/16 to No. 8	2.35
Norway bars	3.60
Bessemer Machinery, Steel	1.90
Cast steel, base	7.00
Special cast steel, base	14.00 to 15.00

LAG SCREWS.—Quotations are without change. Cone point lag screws are sold at a discount of 75 and 10% from list. Net prices are as follows:

	Net price per 100 ¼-inch.	 ¾-inch.	 1-inch.
3½-inch	$1.17	$2.40	$5.00
4 -inch	1.25	2.55	5.25
4½-inch	1.33	2.70	5.50
5 -inch	1.40	2.85	5.80
6 -inch	1.58	3.20	6.40
7 -inch	1.73	3.50	7.00
8 -inch	1.82	3.85	7.60
9 -inch	2.05	4.10	8.20
10 -inch	2.25	4.45	8.75
11 -inch	2.40	4.70	8.30
12 -inch	2.60	5.00	9.90

CHAIN.—The following quotations are named on chain. Prompt shipments can be made.

Prices are without change per 100 lbs. f. o. b. Pittsburg, as follows:

Sizes in inches.	Proof.	BB.	BBB.
3-16	$8.25	$9.50	$10.00
¼	5.70	6.95	7.45
5-16	4.70	5.95	6.45
⅜	4.15	5.40	5.90
7-16	3.85	5.10	5.60
½ and 9-16	3.65	4.90	5.40
⅝	3.55	4.80	5.30
¾	3.45	4.70	5.20
⅞	3.35	4.60	5.10
1	3.25	4.50	5.00
1¼ and 1⅛	3.35	4.60	5.10

Hand-Made Chain.

Size in inches.	BBB crane chain.	BBB crane, dredge hoisting or steam shovel hoisting chain.	Special "Warwick" crane, hoisting steam shovel hoisting and dredge hoisting chain.	Special "Trident" crane, steam shovel hoisting & dredge hoisting chain.
⅝	$7.95	$8.20	$9.15	$9.15
¾	7.15	7.45	8.45	8.45
⅞	7.67	6.90	7.95	....
1	6.15	6.40	7.45	....
1⅛	5.75	5.95	6.90	....
1¼	5.65	5.90	6.85	....
1⅜ to 1⅞	5.55	5.75	6.80	....

SPIRAL RIVETED PIPE.—Prices continue unchanged from the last report. The prices given below are f. o. b. factory, freight equalized, with New York City being figured at a discount of 50, 10 and 10% from list. They are for orders amounting to about $250. For large orders, of several carloads, prices are from 12½% to 20% cheaper.

Diameter in ins.	*Thickness of steel, Birmingham wire gage.	Net price per 100 ft. With bolted joints complete. Plain.	 Asphalted.	 Galvanized.
3	20	$21.80	$14.21	$20.70
4	18	19.76	21.48	30.74
5	18	23.49	23.70	37.14
6	16	33.05	35.76	49.73
7	16	37.58	40.76	56.82
8	16	43.17	46.80	65.00
9	16	50.06	54.10	74.22
10	14	66.42	71.08	96.15
11	14	71.20	76.57	102.24
12	14	83.75	89.15	118.32
13	14	89.67	96.55	127.98
14	14	99.14	105.51	138.85
15	14	108.05	114.89	151.92
16	14	117.53	124.82	166.58
18	12	167.43	175.95	226.44
20	12	183.79	193.30	248.39
22	12	200.48	210.64	269.21
24	12	219.92	231.07	293.99
26	10	280.26	292.41	370.78
28	10	301.32	314.89	395.37
30	10	324.81	339.15	430.64

*Made in both lighter and heavier gages at corresponding differences in price.

NAILS.—The demand for nails is not at all active, but the jobbers who have been running on light stocks are buying more freely. Prices are without change, wire nails in Pittsburg being held at $1.75 base in carload lots to retailers with an advance of 10 cts. for less than carload lots. In New York wire nails are sold from store at $2 per keg. Cut nails are held at $1.65 per keg in carload lots Pittsburg, and $2 per keg from store New York. All of these prices are per 100 lbs.

WIRE.—The demand for wire in the West shows considerable improvement. Some of the Western consumers have placed quite generous orders for next year delivery. Quotations on plain wire are as follows: Carloads, annealed, $1.50; galvanized, $1.80. Less than carload lots are held at an advance of 10 cts. per 100 lbs. over these prices. Barbed wire in carload lots is $1.70 for the painted and $2 for the galvanized. An advance of 10 cts. per 100 lbs. is also charged for less than carload lots. Prices named are per 100 lbs. at mill in the Pittsburg district.

SWEDISH STEEL.—There is a fair inquiry and the demand seems to be steadier than a month ago. Contractors have purchased more freely during the last fortnight.

Prices are without change. Drill steel, either round, hexagonal or octagon, is 6 cts. per lb. for all sizes ⅝ to 2 ins. For sizes 2⅛ to 3 ins. 7 cts. is quoted and 3⅛ to 4 ins. is 7½ cts.

Hollow drill rod is held at 12½ to 15 cts. for the imported.

Anvils of Swedish steel are held at 9 to 9½ cts. per lb. They weight from 50 to 60 lbs.

SWITCH POINTS.—The following prices are named f. o. b. mill for switch points in lots of ten or more pair: For 60-lb. rail, 10-ft. points, $16.25; 15-ft. points, $17.50; for 70-lb. rail, 10-ft. points, $18; 15-ft. points, $25; for 80-lb. rail, 10-ft. points, $25.50; 15-ft. points, $27.75; for 90-lb. rail, 15-ft. points, $30.50; for 100-lb. rail, $33.50. All of the above are furnished with three rods, except the 10-ft. points for 60 or 70-lb. rail, which have only two.

BOLTS.—Prices are without change. The discount on common carriage bolts, to the retail trade and large consumers is 70 and 7½% from list, on bolts ⅜ × 6 ins., and smaller. The lowest price is 65 and 5% discount for larger and longer bolts. Net prices are as follows:

Length in inches.	Diameter in inches—Net price per 100. ⅜	 ½	 ¾
4	$0.74	$1.22	$2.86
5	0.83	1.36	3.15
6	0.92	1.52	3.50
7	1.22	1.65	3.75
8	1.34	1.80	4.25
9	1.45	1.95	4.50
10	1.55	2.20	4.75
12	1.75	2.40	5.25
14	1.90	2.70	5.90
15	2.05	2.85	6.25
18	2.40	3.25	7.20
20	2.60	3.50	7.75

FROGS.—For mill shipments, of ten or more, prices are as follows: Bolted frogs No. 7, for 60-lb. rail, $15; for 70-lb. rail, $16.50; for 80-lb. rail, $18; No. 8 frogs for 90-lb. rail, $21; for 100-lb. rail, $23. Plate frogs No. 7, riveted to ⅝-in. plate for 60-lb. rail, $18; for 70-lb. rail, $20; for 80-lb. rail, $21.50. No. 8 frogs bolted to a ¾-in. plate for 90-lb. rail are $25.50; for 100-lb. rail, $27.50.

REINFORCING MATERIALS.

TRIANGULAR MESH.—The demand continues good. Shipments are now being made promptly.

The following quotations are for the lots of the size named f. o. b. mill in the Pittsburg district:

Style No.	Cross sec. area per ft. width.	Price per 100 sq. ft. Carload lots.	 Less than carloads and more than 10,000 sq. ft.
4	.102	$1.03	$1.25
5	.077	.82	.99
6	.058	.65	.78
7	.041	.50	.61
23	.170	1.73	2.08
24	.142	1.48	1.80
25	.124	1.32	1.60
26	.110	1.20	1.45
27	.085	.98	1.19
28	.066	.81	.98
29	.049	.67	.81
31	.261	2.55	3.08
32	.225	2.20	2.67
33	.196	1.96	2.38
34	.146	1.51	1.82
35	.109	1.20	1.45
36	.075	.89	1.07
38	.380	3.62	4.38
39	.325	3.12	3.77
40	.283	2.74	3.30
41	.208	2.08	2.52
42	.151	1.58	1.92
43	.101	1.13	1.36

This material is made in regular widths of 18, 22, 26, 30, 34, 38, 42, 46, 50, 54 and 58 ins. Standard lengths of rolls are 150, 300 and 600 ft. Cutting to special length is charged extra.

BARS, CONCRETE REINFORCING.—There is a very fair inquiry for all kinds of bars. Steel bars are selling at 1.40 cts. at the mill Pittsburg. The demand for reinforcing bars, however, is better than for common bars, and the following quotations are based on a price of 1.45 cts. Pittsburg:

	Cts. per lb. Plain.	 *Deformed
¾-inch and larger	1.45 to 1.55	1.50 to 1.60
⅝-inch	1.50 to 1.60	1.55 to 1.65
½-inch	1.55 to 1.65	1.60 to 1.70
⅜-inch	1.70 to 1.80	1.75 to 1.85
¼-inch	1.95 to 2.05	2.00 to 2.10

Bar from stock Pittsburg are usually cut to the required length without extra charge. Prices are as follows;

	Cts. per lb. Plain.	 *Deformed.
¾-inch and larger	1.65 to 1.75	1.75 to 1.85
⅝-inch	1.70 to 1.80	1.80 to 1.90
½-inch	1.75 to 1.85	1.85 to 1.95
⅜-inch	1.90 to 2.00	2.00 to 2.10
¼-inch	2.15 to 2.25	2.25 to 2.35

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*The price of deformed bars varied according to the shape and some are held much higher than these prices.

Twisted bars are held at an advance of 10 to 25 cts. over plain bars.

The base price on plain bars from store, Chicago, is 2 to 2.10 cts.

EXPANDED LATH.—Prices are unchanged. The price for carload lots given below is f. o. b. mill Central Ohio:

Carload Lots. Price in cts. per sq. yd.

Gage.	Weight per sq. yds.	Black.	Painted.	Galvanized.
27	2¼ lbs.	11½	12¼	17½
26	2½ lbs.	12½	13¼	18½
25	2 lbs.	13½	14¼	19½
24	3.4 lbs.	14½	15¼	20½

Small Lots from New York, Store.

Prices in cents per sq. yd.

Gage	Black	Painted	Galvanized
27	13	13¾	19
26	14	14¾	20
25	15	15¾	21
24	16	16¾	22

This lath is packed 9 sheets to the bundle.

DIAMOND LATH FROM STORE.

Designation.	Gage.	Weight per sq. yd.	Price. Per sq. yd. Black, cts.
A	24	4 lbs.	20
A Special	24	4 lbs.	18
B	27	2.9 lbs.	16½
B Special	27	2.9 lbs.	15
B B	27	2.33 lbs.	14
Square Twist	24	4 lbs.	20
Diamond No. 24	..	3.75 lbs.	20
" No. 24 Special	..	3 lbs.	16½
" No. 26	..	2.66 lbs.	16½
" No. 26 Special	..	2.1 lbs.	14
Square Twist No. 27	..	2.75 lbs.	14½

INTERLOCKING PLATES.—For interlocking steel plates, of 24 gage black steel, f. o. b. mill Central Ohio, the following prices are named:

Length.	Per 100 sq. ft. Weight.	Price Flat Sheets.
Under 4 ft.	100 lbs.	$11.00
4 to 6 ft.	160 lbs.	10.00
6 to 8 ft.	160 lbs.	9.50
8 to 10 ft.	160 lbs.	9.00
10 ft.	160 lbs.	8.50

Curved sheets are held at an advance of $1 per 100 sq. ft. over flat.

For a desirable order prices might be shaded about 10%.

EXPANDED METAL. — Prices continue steady. The following table of prices are for small lots from the warehouse, either New York or Pittsburg. Material concessions, however, will be made for large orders.

Mesh, ins.	Gage (Stubs).	Section in sq. in. per ft. width.	Weight, in lbs., per sq. ft.	Size of Standard Sheets in ft.	Price per sq. ft. f.o.b. New York.
½	18	.209	.74	8 × 3 or 6 ft.	5.5
¾	13	.225	.80	6 × 8 or 12 ft.	6.2
1½	13	.207	.70	4 × 8 or 12 ft.	5.5
2	12	.166	.56	5 × 8 or 12 ft.	4.8
3	16	.083	.28	6 × 8 or 12 ft.	2.4
3	10	.148	.50	5.25 × 8 or 12 ft.	2.6
3	10	.178	.60	6 × 8 or 12 ft.	2.8
3	10	.267	.90	4 × 8 or 12 ft.	3.8
3	10	.356	1.20	6 × 8 or 12 ft.	5.
3	6	.400	1.38	3.5 × 8 or 12 ft.	6.2
3	6	.600	2.07	4.66 × 8 or 12 ft.	8.3
4	16	.093	.42	4.5 × 8 or 9 ft.	2.8
6	4	.245	.84	5 × 8 or 12 ft.	3.7
6	4	.368	1.26	5 × 8 or 12 ft.	5.

CLAY PRODUCTS.

SEWER PIPE.—The large work of the year has been done, but there is a fair inquiry for future work. The season has ended better than was thought possible three months ago.

Discounts continue unchanged. Those applying to the "Eastern List" are as follows: 86% for sizes up to 24-in.; 78% for 27 and 30-in. and 73% for 33 and 36-in. At these discounts the net prices per ft. for carload lots f. o. b. factory, are as follows:

2 and 3-in.	$0.028	18-in.	$0.267
4-in.	.035	20-in.	.315
5-in.	.042	21-in.	.378
6-in.	.056	22-in.	.42
8-in.	.077	24-in.	.455
9-in.	.091	27-in.	.99
10-in.	.112	30-in.	1.20
12-in.	.14	33-in.	1.70
15-in.	.19	36-in.	1.89

HOLLOW WALL TILE.—The demand is good and considerable tile that was sold during October, something rather unusual.

Prices are very firm, and for hollow wall building tile, f. o. b. factory, Perth Amboy, N. J., are as follows:

Size.	Price per block, in cts.
4 × 12 × 12-in.	5.25
6 × 12 × 12-in.	6.6
8 × 12 × 12-in.	8.9
10 × 12 × 12-in.	10.5
12 × 12 × 12-in.	12.1

Fireproofing partition blocks are unchanged as follows:

Size.	Price per block, in cts.
2 × 12 × 12-in.	4.4
3 × 12 × 12-in.	4.4
4 × 12 × 12-in.	5.
6 × 12 × 12-in.	6.6
8 × 12 × 12-in.	8.8

These prices are for what would be considered small orders—approximately carload lots. For quantities which exceed $1,000 worth of material, concessions will be made.

DUCT TELEPHONE.—Business is fair. Small lots are sold at 4½ to 5 cts. per duct ft., but considerable concessions are made for desirable orders.

ROOFING TILE.—Prices are steady, and continue without change. The best grade of promenade roofing tile in flat blocks for high grade roofs is sold at $20 per M. for run of kiln and $30 per M. for selected. A cheaper form of tile with a smooth face can be had at $10 to $12, but it is not suitable for roof gardens. These prices are for 9 × 9 blocks f. o. b. factory. It requires 258 blocks to lay 100 sq. ft. of roof surface and, in consequence, the price per 100 sq. ft. of roof surface would be $4 to $5 for the smooth blocks; $7.82 for the run of kiln, and $10.73 for the selected.

Vitrified tile, unglazed, of the French or Spanish type, is sold, at approximately $8.50 per 100 sq. ft. of roof surface f. o. b. factory. Glass tiles are sold at 60 cts. each. It requires 183 of these for 100 sq. ft. of roofing.

FLUE LINING.—Prices continue without change. This discount from list, f. o. b. mill, is 85%, delivered in New York; in small lots, they can be had at 78%. Based on a discount of 85% at the mill net prices are as follows:

	Weight in lbs.	Price per ft.
4½ × 8½-in.	14	$0.04½
4½ × 13 -in.	20	.068
4½ × 18 -in.	40	.15
6 × 12 -in.	22	.075
7 × 7 -in.	15	.053
8½ × 8½-in.	18	.068
8½ × 13 -in.	28	.098
8½ × 18 -in.	45	.135
12 × 16 -in.	45	.15
13 × 13 -in.	38	.128
13 × 18 -in.	57	.18
14 × 16 -in.	60	.165
16 × 16 -in.	65	.24
16 × 20 -in.	80	.30
18 × 20 -in.	75	.30

MILL SUPPLIES.

SHAFTING.—The general demand for shafting is better than a month ago and the expectations are that the automobile manufacturers will buy as much shafting during the coming season as they did during the last, but it must be admitted that they are not putting orders on the books with any great rapidity. The general figure for carload lots is 55% discount from list, although some desirable orders can be placed at 55 and 5% discounts. Small lots, less than carloads, but shipped from the mill, are sold at 50% discount.

The following net prices per foot are based on the 50% discount: ¾-in., 4.15 cts.; 1-in., 7.30 cts.; 1¼-in., 11.50 cts.; 1½-in., 15 cts.; 1¾-in., 20.50 cts.; 2-in., 25.50 cts.; 2¼-in., 38.75 cts.; 2½-in., 41.75 cts.; 2¾-in., 50 cts.; 3-in., 60 cts.; 3½-in., 90 cts.; 4-in., $1.27½; 4½-in., $1.78; 5-in., $2.35; 5½-in., $3; 6-in., $3.85.

CHAIN BELTING.—Business continues good. Some of the manufacturers of chain are building larger units than formerly and the prospects are that the volume of business will show an increase. Prices continue unchanged.

From 3 HP. to 10 HP., 30-in. centers complete, with two sprockets, $7 to $8 per HP.; from 10 HP. to 25 HP., 36-in. centers complete, $5 to $6 per HP.; from 25 HP. to 100 HP., 60-in. centers complete, $4 to $5 per HP.; from 100 HP. to 500 HP., 72-in. centers complete, $3 to $4 per HP.

PACKING. — Prices continue without change. The following quotations are for small lots in original packages.

Asbestos wick and rope, 13 cts.; sheet rubber, 11 to 13 cts.; pure gum rubber, 40 to 45 cts.; red sheet, 40 to 50 cts. Cotton packing can be had at 16 to 25 cts.; jute at 3¼ to 3½ cts., and Russian at 9 to 10 cts.

GRAPHITE LUBRICANTS.—Prices continue without change, as follows:

Engine flake graphite, 12 cts.; oiled graphite, 20 cts.; car box grease, 8 cts.; gear grease, for electric cars, 4¼ cts.; cup grease, 15 cts.; axle grease, 8½ cts.; automobile graphite grease, 16 cts.

Large consumers and jobbers can obtain considerable concessions from these figures.

BELTING.—The demand is good. In the leather belting trade there is a reported betterment in sentiment, which tends to improve matters. Quotations are unchanged, the discount on rubber belting being 40% from list for the best grade; 40 and 10% for standard and 60 and 10% for competition. Leather belting is likewise without change at 55% discount for extra heavy; 60% heavy; 60 and 10% medium; 60 and 10 and 10% light; 70% shoulder, and 70 and 10% for standard.

The following net prices per ft. of rubber belting are computed at the above discounts. The price of leather belting is, as stated, unchanged from last month, and the prices may be found on page 61 of issue of Aug. 4.

Width, inches.	2-ply.	4-ply.	6-ply.	8-ply.
3	$0.16	$0.22	$0.33	....
4	.21	.36	.45	....
5	.26	.44	.55	....
6	.30	.51	.65	$0.87
7	.36	.55	.75	1.01
8	.40	.57	.87	1.15
9	.46	.64	.96	1.30
10	.51	.72	1.01	1.44
12	.60	.86	1.30	1.70
14	.72	1.01	1.53	2.01
16	.83	1.17	1.76	2.35
18	.93	1.34	2.00	2.65
20	1.04	1.49	2.25	2.98
22	1.17	1.67	2.50	3.33
24	1.30	1.85	2.76	3.70
26	1.42	2.04	3.06	4.08
28	1.58	2.22	3.33	4.45
30	1.69	2.40	3.60	4.80
34	1.94	2.79	4.16	5.54
38	2.22	3.15	4.70	6.30
42	2.46	3.50	5.30	7.00
46	2.75	3.88	5.80	7.72
50	3.02	4.25	6.40	8.50
56	3.40	4.80	7.20	9.60
60	3.67	5.20	7.80	10.40

LUBRICATING OILS.—Business is fairly satisfactory. Quotations continue without change, the following figures being named for 5-bbl. lots.

	Cts. per gal.
*Cylinder, dark	20 to 27
*Cylinder, steam, refined	14 to 22
Neutral Oils, filtered:	
Stainless white, 32 to 34 gravity	28 to 29
Lemons, 33 to 34 gravity	17 to 19
Dark, 32 gravity	15 to 18
Crank Case oil	15 to 17

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*Prices vary according to test.

HIGH SPEED STEEL.—There is a very fair demand for all kind of high speed steel. Prices are without change at 50 to 75 cts. per lb.

COTTON WASTE.—It is evident that the high prices received last year will be in force during the coming year for the price of raw cotton is as high as a year ago.

Boled waste in New York is 10 to 11 cts. per lb.

FIRE HOSE.—Prices of hose are unchanged. The standard grade of underwriters' cotton rubber-lined hose, 2⅝-in. diameter warranted, 350 lbs. pressure, is sold in 50-ft. lengths, complete with couplings, at 65 cts. per ft. Common hose, 2½-in. diameter, tested to 200 lbs. pressure, is 35 cts. per ft.

PAVING MATERIALS.

ROAD OIL.—Business is fair and the inquiry for next year is large. The past season has been the most satisfactory one sellers have ever experienced and the coming one is expected to show another gain. Prices continue unchanged, 30% asphaltum oil being quoted at 4 cts. per gal. Texico macadam asphalt, 90 to 95%, is 11 cts. per gal., f. o. b. New York or Philadelphia; A or X Tarvia in bbls. is 8½ to 9½ cts. per gal.; B grade in bbls. is 7 to 8 cts. per gal.

GRANITE BLOCK.—Already city engineers are specifying considerable block for use next year and it looks as though the demand would be just as large as last season. The price of block continues firm. Cape Ann blocks, delivered in New York City, are sold at $1.60 to $1.75 per sq. yd. Dressed block to lay with ¼-in. joint is $2 to $2.10 per sq. yd.

ASPHALTUM.—Prices of asphaltum are steady and firm. Trinidad is quoted at $25 per net ton. California asphaltum is $26 to $30 per net ton f. o. b. New York and $16 to $19 at point of shipment.

PAVING BLOCKS, WOOD.—Prices continue without change, as follows: For long leaf yellow pine blocks having not less than 20 lbs. oil per cu. ft., $1.85 is quoted for 4-in. block; $2.05 for 3½-in. block and $2.25 for 4-in. block. All these prices are per sq. yd., f. o. b. New York.

VITRIFIED BRICK.—Quotations are more or less nominal in view of the light business under contract, but the season has been fairly satisfactory. Prices are unchanged at 55 to 70 cts. per sq. yd. at point of shipment.

LUMBER.

The market continues as unsatisfactory as last month. Sellers of lumber have large stocks on hand, but more headway has been made in the last month toward disposing of the unwieldly surplus than any other single month this year. Elsewhere in this issue will be found a description of the fire-killed timber offered for sale by the Forestry Division of the Department of Agriculture. It is the intention of the Forestry Department to dispose of all the fire-killing timber resulting from the forest fires in the Northwest during the last Summer.

LONG LEAF YELLOW PINE.—The demand for this kind of lumber is fair, more railroad work having been taken up during the last month. Prices are unchanged and for delivery from yard in New York and vicinity, for material classed as "Merchantable" under the 1905 rules of the Association, prices are as follows:

Prices per Thousand Feet in Yard, New York.

	Length— 20 ft. base,	21 to 25 ft.	26 to 30 ft.	31 to 35 ft.
8 in. wide and under by 8 in. thick and under.	$31	$32	$33	$34
10 in. wide by 10 in. thick and under.	33	34	35	36
12 in. wide by 12 in. thick and under.	36	37	38	39
14 in. wide by 14 in. thick and under.	43	44	46	46
16 in. wide by 16 in. thick and under.	45	46	47	48

For pieces longer than 35 ft. and less than 40 ft. add from $4 to $8 to base price.

NORTH CAROLINA PINE.—Prices are without change as follows: For pieces 20 ft. long and less, in car lots, New York prices per thousand are as follows:

2 × 4-in.	$18	2 × 10-in.	$21
2 × 6-in.	18	2 × 12-in.	22
2 × 8-in.	18		

HEMLOCK.—The base price of Pennsylvania hemlock continues without change at $21. West Virginia can be obtained at $20.50. The following prices are ruling in New York:

Price Per Thousand f. o. b. cars New York.

Size.	Length— 10 ft.	12 ft.	14 ft.	16 ft.
2 × 4-in.	$23.00	$21.00	$21.00	$23.00
2 × 6-in. to 2 × 10-in.	21.00	21.00	21.00	18 to 20
3 × 4-in. to 12 × 12-in.	21.50	21.50	22.00	19 to 21
1 × 8-in.	....	18.00	18.00	18.00
1 × 10-in and 1 × 12-in.	....	18.50	18.50	18.50

CROSS TIES.—The demand for ties shows some improvement, but the market has been very much unsettled. One large Eastern railroad system, which gives its purchasing agent a free rein, has been able to purchase its ties on an average of 5 to 10 cts. cheaper than any other road. This is because the purchasing agent was in a position to take advantage of the offering of sellers who needed money. The present demand is said to be intermittent. The following prices quoted f. o. b. New York by J. S. Baxter Co., 15 William St., New York City, are without change from last month, except for 7 × 9-in., which are one cent cheaper.

	Cents each.
7 × 9-in. by 8 ft. 6-in.	79
6 × 9-in. by 8 ft.	74
6 × 8-in. by 8 ft.	69

Second-class, sound and square edge, are quoted as follows:

	Cents each.
7 × 9-in. by 8 ft. 6-in.	63
6 × 9-in. by 8 ft.	53
6 × 8-in. by 8 ft.	47

OILS AND PAINTS.

PETROLEUM PRODUCTS.—All kinds of petroleum products are being sharply cut by the leading producers. There is even an international trade price war going on in the petroleum market, which bids fair to make some startling low prices, especially for export. The Standard Oil Co. quotes the prices of crude oil in bbls. at the wells as follows: Pennsylvania, Second Sand and Tiona, $1.30; Mercer black is 87 cts.; Corning, 77 cts.; New Castle, 84 cts.; Indiana, 77 cts.; Illinois, 60 cts.; Illinois heavy, below 30 gravity, 52 cts.; Kansas heavy, 30 cts.

In the New York market petroleum from tank wagon is unchanged at 6 cts. per gal.

Auto naphtha and stove gasoline is 1 ct. per gal. lower at 13¾ cts.

Fuel oil is 90 cts. to $1 per bbl.

LINSEED OIL.—The continued high price of flaxseed and consequent unusual figure for linseed oil has sent quotations to new high figures, and is restricting consumption. Flaxseed is now selling around $2.75 per bushel, a price unheard of since the Civil War. Practically no relief will be felt before another crop matures. Linseed oil is quoted at 97 to 98 cts. per gal.

SPIRITS TURPENTINE.—In common with other naval stores, the price of turpentine has been marked up again and is now selling at 79 cts. per gal. in 5-bbl. lots in New York. In Charleston, S. C., the price is 75 cts., and in Savannah, Ga., 76¼ cts.

PAINTS.—The price of paints is much higher than earlier in the year, due to the high cost of linseed oil. Buyers of ready mixed paints are being cautioned to be particularly careful of the paints purchased for the scarcity and high price of oil is leading some unscrupulous dealers to adulterate their products.

Prices of white lead in oil are unchanged. For lots of 500 lbs. or over, in 100 to 250 and 500-lb. kegs, 7½ cts. per lb. is quoted; in 25 and 50-lb. kegs, 7¾ cts. is quoted. Red lead and litharge in bbls., half bbls. and 100-lb. kegs, is 8 cts. per lb.

Graphite paint is moving in good volume, but prices are from 10 to 20 cts. per gallon higher. Best grades of graphite paint in linseed oil can be purchased at $1.40 per gal.

Hydrex preservative paint is 75 cts. per gal. in bbl. lots New York City.

Colors in oil are quoted at the following prices per lb: Lamp black, 12 to 14 cts.; Chinese blue, 36 to 46 cts.; Prussian blue, 32 to 36 cts.; Van Dyke brown, 11 to 14 cts.; Chrome green, 12 to 16 cts. Raw or Burnt Sienna, 12 to 15 cts. Raw or Burnt Umber, 11 to 14 cts.

CHEMICALS.

There have been no price changes during the month. The following quotations are named for delivery in New York City for lots of fair size:

	Cts. per lb.	
Nitric acid, 30°	3.87½	to 4.25
Nitric acid, 40°	4.50	to 4.87½
Sulphuric 60°	0.90	to 1.00
Sulphuric, 66°	1.00	to 1.25
Sal Ammoniac, lump	9.25	to 9.75
Sal Ammoniac, granulated	5.87½	to 6.00
Sal Ammoniac, gray	6.00	to 6.25
Sulphur, roll	1.85	to 2.15
Sulphur, flour	2.00	to 2.40
Sulphur, flowers	2.20	to 2.60
	Per gallon.	
Alcohol, grain, U. S. proof	$2.54	to $2.57
Alcohol, denatured, 5-bbl. lots	.41	to .42
Alcohol, denatured, ½ bbls.	.46	to .47
Alcohol, wood, 95 to 97	.52	to .57
Alcohol, wood, purified	.80	to ..

GLASS.

WINDOW GLASS.—The demand for common window glass is excellent. This seems to be general from all parts of the country. Manufacturers have little stock on hand and jobbers are unable to keep their usual assortment, owing to the rapidity with which their customers call for deliveries. It is expected that the price of glass will be somewhat higher, but for the present the discount is unchanged at 90% from list for all sizes of single and double strength.

The net prices per box of 50 sq. ft., at the discount named, are as follows:

American Window Glass.

Size of Glass, Ins.	Single Thickness, Price per box, 50 sq. ft. A.	B.
6 × 8 to 10 × 15	$2.40	$2.20
11 × 14 12 × 13 to 14 × 20	2.52	2.40
10 × 26 to 16 × 24	2.70	2.52
18 × 22 20 × 20 to 20 × 30	2.87	2.64
15 × 36 to 24 × 30	2.96	2.70
26 × 28 to 24 × 36	3.14	2.79
26 × 34 28 × 32 to 30 × 40 30 × 30	3.47	2.94
32 × 38 34 × 36 to 30 × 50	4.00	3.46
30 × 52 to 30 × 54	4.27	3.76

VAULT LIGHTS.—Prices continue without change, contractors furnishing their own molds can obtain glass at from 4 to 5 cts. per lb. Bull's eyes, 3-in. in diameter, are 3 cts. each, and square lights, 3½ × 3½, are 5 to 6 cts. each.

SKYLIGHT GLASS.—Business shows quite an improvement. The demand has been large, but still makers are able to supply the wants of their customers with the promptness desired. Prices continue without change from the last report, as follows:

Thickness, ins.	Price per sq. ft.
1/8	7 cts.
3/16	10 cts.
1/4	15 cts.

Wired skylight glass, ¼-in. thick, is 25 cts. per sq. ft.

PLATE GLASS.—Business has been active. The leading makers report a good outlook, in fact, many contracts have been entered into for future shipments.

The price is unchanged from last month at 80% discount from list.

In the accompanying table the net price of polished plate glass is figured at this discount. These prices apply to the glass only, an extra charge being made for boxing or cutting to special sizes.

NET PRICES OF POLISHED PLATE GLASS IN DOLLARS.

Length, feet.	Width, Feet 1	1.5	2	2.5	3	3.5	4	4.5	5	6	7	8	9	10
1	$0.24	$0.38	$0.50	$0.66	$0.86	$1.04	$1.18	$1.38	$1.52	$2.40	$2.86	$3.25	$3.75	$4.17
1.5	....	.59	.86	1.10	1.42	2.10	2.40	2.76	3.08	3.75	4.38	5.00	5.70	6.90
2	....	....	1.18	1.59	2.40	2.86	3.25	3.75	4.17	5.00	5.90	6.85	7.85	8.90
2.5	....	....	....	2.55	3.08	3.68	4.20	4.70	5.30	6.40	7.60	8.90	10.10	11.10
3	....	....	....	....	3.75	4.40	5.00	5.75	6.90	7.90	9.40	10.70	12.25	13.60
3.5	....	....	....	....	....	5.20	5.90	6.75	7.60	9.40	11.10	12.70	14.40	15.90
4	....	....	....	....	....	....	6.86	7.90	8.90	10.70	12.70	14.50	16.40	18.20
4.5	....	....	....	....	....	....	....	9.10	10.10	12.25	14.40	16.40	18.40	20.50
5	....	....	....	....	....	....	....	....	11.10	13.60	15.90	18.20	20.50	27.00
6	....	....	....	....	....	....	....	....	....	18.20	19.00	21.80	25.00	27.80
7	....	....	....	....	....	....	....	....	....	....	22.20	26.00	29.40	32.50
8	....	....	....	....	....	....	....	....	....	....	....	29.70	33.50	37.30
9	....	....	....	....	....	....	....	....	....	....	....	....	38.00	42.00
10	....	....	....	....	....	....	....	....	....	....	....	....	....	47.50
11	4.60	7.20	9.80	12.50	15.00	17.50	20.00	22.60	26.00	30.60	36.20	41.20	47.20	65.00
12	5.00	7.90	10.70	13.60	16.40	19.00	21.80	25.00	28.00	33.50	39.30	44.80	63.50	70.80
13	5.50	8.70	11.80	14.80	17.75	20.80	24.10	27.20	30.10	36.40	43.50	61.50	69.00	112.50
14	5.90	9.40	12.70	15.90	19.00	22.25	26.00	29.20	32.50	39.40	46.70	66.00	109.00	148.30
15	....	....	....	....	....	24.40	28.00	31.30	34.80	42.00	61.80	70.80	141.00	163.50
16	....	....	....	....	....	33.00	37.80	42.50	47.20	55.50	66.00	109.00	157.00	202.00
17	....	....	....	....	....	35.00	40.00	45.30	50.00	60.00	70.30	143.00	192.00	294.00
18	....	....	....	....	....	38.00	42.50	47.80	53.20	63.50	109.00	157.00	280.00	311.00

LINE CONSTRUCTION.

ALUMINUM.—The base price of aluminum wire continues without change at 31 cts. Owing to the low price of copper wire it is difficult to sell aluminum wire in competition with copper.

POLES.—Cedar poles are quoted as follows by the R. D. Dowie Pole Co., 432 New York Block, Seattle, Wash. The price is f. o. b. loading point:

Length in ft.	Diameter at top. 8-in.	9-in.
30	$2.70	....
35	3.15	3.50
40	3.60	4.00
45	...	4.50
50	...	5.00
55	...	5.50
60	...	7.20
65	...	9.75
70	...	10.50
75	...	11.25
80	...	12.00

White cedar poles are quoted by the Backus-Judd Lumber & Cooperage Co., Minneapolis, Minn., f. o. b. Rex, Mich., freight rate to Chicago 12 cts., as follows:

Length in feet.	Price each — Diameter at top. 5-in.	6-in.	7-in.
25	$0.65	$1.10	$1.50
30	...	1.60	3.75
35	...	4.00	5.00
40	...	5.25	7.00
45	...	7.25	9.50
50	...	10.00	11[illegible]

Chestnut poles, f. o. b. Mechanicsville, N. Y., are quoted by T. C. Luther of that place as follows:

Length in feet.	Price each — Diameter at top. 5-in.	6-in.	7-in.
25	$1.50	$2.00	$2.75
30	2.50	2.75	3.25
35	2.75	3.25	4.00
40	3.25	4.00	5.50
45	4.00	5.50	7.50
50	5.50	7.50	9.50

FIR CROSS ARMS.—Prices are unchanged as follows:

Length. Size, 3¼ × 4¼-in.	Price per arm in cts. Pacific Coast.	Chicago.	New York.
3 ft., 2-pin	8	13½	15½
4 ft., 2-pin	11	18½	21
5 ft., 4-pin	16	26½	28½
6 ft., 4 and 6-pin	20½	31½	36
8 ft., 6 and 8-pin	28	43	48½
10 ft., 8, 10 and 12-pin	37	55½	67½

TELEGRAPH WIRE.—The demand is not quite as active as it was earlier in the year, still there has been considerable work done in the line of extending existing systems. Prices of wire are unchanged, as follows:

For lots of fair size, the wire measured in Birmingham wire gage, the prices in cts. per lb. are as follows: "Extra Best Best," Nos. 6 to 9, 4⅝ cts. Nos. 10 and 11, 4½ cts. No. 12, 4⅝ cts. No. 14, 5⅛ cts. "Best Best," Nos 6 to 9, 3¼ cts.; Nos. 10 and 11, 3⅜ cts.; No. 12, 3½ cts.; No. 14, 4 cts. Actual freight is allowed from Trenton, N. J. where it does not exceed 25 cts. per 100 lbs.

COPPER WIRE.—New business shows some improvement but copper wire is, as it has been for the last two years, the dullest branch of the copper trade. No. 8 wire is selling at 14 to 14.25 cts. per pound base.

INSULATORS.—Prices are without change. Glass insulators in lots of more than 1,000 and less than 10,000 are sold at the following prices per 1,000: Double petticoat, 20 oz., $33; Western Union, $30.25; No. 2 cable, $53.90; No. 4 cable, $210; Muncie type, 7-in., $236.50; No. 3 triple petticoat, 4½-in., $90.75.

METALS.

COPPER.—Sentiment, regarding the working value of the leading copper producers agreement to cut down the output of the metal, changed perceptibly during October. Dealers and consumers alike were both to accept it at first, as a practicable solution the the over-production problem. Recurring evidences, during the month, in the shape of reports from important sources, showing that less copper had been produced brought a more general realization that the theory was rapidly crystalizing into a condition. The news having the most important bearing on the subject, was the report of the Copper Producers' Association for September. A reduction of about 8,000,000 lbs. in production, as compared with August, was a convincing argument. This decrease added to the 12,000,000 lbs. increase in domestic and foreign deliveries produced a decline in surplus stocks of approximately 20,000,000 lbs. While it is hardly probable that that rate of reduction in stocks in first hands will continue for a number of consecutive months, it is likely the trend will keep up until a material reduction has been achieved. The change of opinion noted has been manifested in both price and business. Estimates of sales for October range from 100,000,000 lbs. to 200,000,000 lbs. It is probable, however, that these extremes reflect more or less personal interests, and that 125,000,000 lbs. is nearer the actual amount. The principal buying was for 1910 delivery, but a part, at least, extending into 1911, reflects greater confidence in the stability of copper prices than has been in evidence for several months. Exports during October were 27,512 tons, and while not as heavy as the movement in September, the total compares favorably with the average of the first nine months of the year. The piece of electrolytic on October 1, was 12.50 cts., delivered 30 days, and lake was 12.62½ cts. Today the former is 12.87½ cts. and the latter is 13 cts.

TIN.—The pig tin market has been wild and beyond the scope of fundamental business guides all through the month. Manipulation has carried the prices against the current of arrivals of tin in the local market, to a point where the consumers have been forced to pay a large premium when if left to take its natural course, the heavy arrivals would have caused a decline in prices. This condition has reduced buying by consumers to a minimum. Early in October the price of spot tin declined to 34.45 cts. in the local market, and from that level, with wide fluctuations, it advanced to 37.65 cts. This is the highest price at which spot has sold for three years. The market declined since to 35.50 cts., and followed with another advance, at the close of the month, to 36.75 cts. Arrivals at Atlantic points amounted to 4,407 tons during October, and shipments into domestic consumption 3,350 tons, leaving a balance in favor of stocks, of 1,057 tons. It is this unavailable surplus, made so by speculator which justifies the consumer complaint of the advance in spring.

LEAD.—The market for pig lead was quiet and firm during October. Outside sellers maintained a steady price level, ranging from 2½ to 5 points above the quotation of the American Smelting and Refining Co. The respective quotations are 4.45 cts. and 4.40 cts, delivered in New York.

Sheet Lead.	Per lb.
Large lots	6.25 cts.
Small lots	6.75 cts.
Lead Pipe.	**Per lb.**
Large lots	5.75
Small lots	6.40

SPELTER.—The spelter market developed decidedly more strength during October than it has displayed since last spring, and prices have advanced 30 points to 5.95 cts. in New York. It is said that a large local dealer, allied with several prominent producers, has been prominent in advancing the market. Decreases in production, and a higher cost rate, are the prime reasons given for the advance. These points are in a sense justified by conditions in the present field of operation, due to the failure of the natural gas supply to meet the requirements of plants, but they have not induced active buying.

MISCELLANEOUS METALS.—Small lots of metal and metal products can be obtained from jobbers' stores, New York, at the following prices:

	Per lb.
Bismuth	$2.25
Brass tubes, ron pipe sizes:	
½-in.	.19
¾ to 3-in	.18
3½-in.	.19
4-in.	.20
Brass, sheets	.14¼
Brass, rods	.14¼
Solder, ½ and ½ guaranteed	.24
Zinc sheets	.08½
Manganese bronze rods	.16
Manganese bronze in crucible form	.14
Monel metal, ingot	.16

OLD METAL.—There has been a good demand for old metal for export. Miscellaneous lots of scrap metal, amounting to about a ton, can be sold to dealers in New York at about the following prices::

	Cts. per lb.
Copper, heavy and crucible	10.75 to 11.00
Copper, heavy and wire	10.50 to 10.75
Copper, light and bottoms	9.50 to 9.75
Brass, heavy	7.25 to 7.50
Brass, light	5.75 to 6.00
Heavy machine composition	9.50 to 9.75
Clean brass turnings	7.00 to 7.25
Composition turnings	8.25 to 8.50
Lead, heavy	... to 3.50
Lead, tea	... to 3.25
Zinc, scrap	... to 3.75

ROOFING COPPER.—The demand for all kinds of copper sheets is excellent. Some slight variation in prices is noted, but it is not considered important, and 18 cts. is quoted as the market.

MISCELLANEOUS.

ROPE.—Prices are steady but unchanged. Pure Manila, 9 to 9½ cts.; second grade, 8½ to 9 cts.; competitive grades, 8 to 8½ cts. per lb. Pure Sisal is 7¼ to 7½ cts. for the highest grades, and 6¼ to 6¾ cts. for less desirable grades. Jute rope in commercial sizes is 5½ to 6 cts. per lb.

ROOFING SLATE.—The prices of roofing slate are unchanged from last month as follows: the quotations are per "square," or 100 sq. ft. of roof surface in carload lots of the size in most general use, f. o. b. quarry stations:

	Per 100 sq. ft.
Vermont, sea green	$4.00 to $4.50
Pennsylvania, Bangor Ribbon	4.00 to 4.50
Maine, Brownsville No. 1	6.00 to 7.75
Maine, Brownsville No. 2	5.60 to 6.00
Red	10.50 to 12.25
Unfading green	4.50 to 5.00
Genuine Bangor	4.50 to 6.00
Pen Argyle	4.00 to 4.50

PINE TAR.—A slight advan is noted, but the market appears to be q ing down after its rapid advance. Kiln quoted at $7.50 and retort at $7.25. Thes rices are per bbl. of 480 lbs.

OAKUM.—Prices of Oakum c nue unchanged. The best grades are s g at 6¼ cts. U. S. Navy, 5¾cts., an umbers' oakum at 2¼ cts.

WATERPROOFING.—The pric for carload lots f. o. b. cars New York, as follows: Hydrex waterproofing fel 1.25 per 100 sq. ft.; Hydrex compound 26 cts. per gal.; Hydrex compound "B," cts. per gal.

Texaco waterproofing cement 30 per ton in car lots, f. o. b. cars N York or Philadelphia.

Asphaltum for waterproofing is at $25 to $27 per net ton.

Glidden's graphite acid proof ng is sold at $1.25 per gal. in bbl., a bbls., and $1.40 per gal. in 5 gal. ca These prices are f. o. b. Cleveland or f elivery from warehouse, New York, C o, St. Louis, Boston or Atlanta.

EXPLOSIVES.—Dynamite of kind usually used by contractors is ap imately 11 to 13 cts. per lb. f. o. b. ry, in ton lots. Blasting powder, cla ed as "soda" grade, is sold at $1.20 to 40 per keg or 25 lbs. in lots of 10,000 The following prices prevail on Trojan in carload lots, minimum 24,000 lbs., f. o. b. Pacific Coast points; No. 1, 13½ cts.; No. 2, 10½ cts.; No. 3, 10 cts. They hav a disruptive force equivalent to 60%, 4 % and 30% of nitro-glycerine.

Eploders, per hundred, are sold at the following prices: 4 ft., $3.60; 6 ft., $4.10; 8 ft., $4.60; 10 ft., $5.10; 12 ft., $5.60; 16 ft., $6.60; 20 ft., $7.50; 24 ft., $9.40; 30 ft., $12; 36 ft., $14.60.

Caps in lots of 10,000 are $7 to $8 per thousand.

Blasting machines for 10 holes are $12; 25 holes, $20; 50 holes, $40; 100 holes, $60.

PAPER.—Prices are without change from last month, as follows:

Tarred Paper:	Per roll of 108 sq. ft.
Standard 2-ply, 40 lbs	$0.45
Extra heavy, 2-ply, 45 lbs	.55
Standard 3-ply, 60 lbs	.65
Extra heavy, 3-ply, 70 lbs	.75

Rosin Sized Sheathing:	Per roll of 500 sq. ft.
light, 35 lbs	$0.38
Medium, 30 lbs	.45
Heavy, 40 lbs	.60

ROOFING CEMENT.—Prices are unchanged at $25 per ton for Texaco.

LIGHTERAGE LIMITS.—The free delivery or "Lighterage Limits" in New York City are as follows: In Manhattan, from a point opposite the Fort Lee ferry, south along the Hudson River around the Battery and north along the East and Harlem Rivers to the Jerome Ave. Bridge at 155th st. In New Jersey, south from Fort Lee Ferry to Bayonne City; points on the north and east shore at Staten Island between Bridge Creek (Arlington) and Clifton, both inclusive, and including Elm Park, Eristina and Shooters Island. In Brooklyn from 69th St., Bay Ridge, north to Port Cove, Astoria, Long Island City.

ASBESTOS.—Asbestos building felt and sheathing in less than ton lots is 3½ cts. per lb. for the light, weighing from 6 to 30 lbs. per 100 sq. ft.; 4 cts. per lb. is charged for the heavy weighing from 45 to 56 lbs. per 100 sq. ft.

Millboard is made in standard sheets, 40 × 40 ins., and 41 × 4 ins. It varies in thickness from 1-32 to ½-in. and in weight from 2 to 27 lbs. per sheet. The net price in 100 lb. lots is 5 cts. per lb.

Transite, asbestos wood, used for fireproofing, ventilators and smoke jacks, comes in standard sheets, 36 × 48 ins., 42 × 48 ins., and 42 × 96 ins. The prices f. o. b. factory, Nassau, N. H., are as follows:

Thickness.	Weight.	Price.
⅛-inch	1 lb.	$0.08
3/16-inch	1½ lbs.	.12
¼-inch	2 lbs.	.16
5/16-inch	2½ lbs.	.20
⅜-inch	3 lbs.	.28
7/16-inch	3½ lbs.	.28
½-inch	4 lbs.	.32
9/16-inch	4½ lbs.	.36
⅝-inch	5 lbs.	.40
¾-inch	6 lbs.	.44
⅞-inch	7 lbs.	.48
1 inch	8 lbs.	.52
1¼ inches	10 lbs.	.56
1½ inches	12 lbs.	.64
1¾ inches	16 lbs.	.72
2 inches	16 lbs.	.80

RUBBER.—All grades of rubber show a decline this month. The reduction in price is especially noticeable to those grades previously unaffected by the decline. Up River Para fine has now declined nearly 50% from the high figure of $2.60 reached early in the year. It can now be had at $1.40 to $1.45, which is a decline of 10 cts. from last month. Up River Para, coarse, can be had at $1.05. Guayule, which sold at 90 cts. last month, can now be had at 60 to 70 cts. Caucho ball is unchanged at $1.05 per lb.

For other Proposal Advertisements see pages 51, 52, 53, 54, 56 of Advertisements and Construction News page 222.

WATER-WORKS, SEWER SYSTEM, ELECTRIC LIGHT AND POWER PLANT.

South River, N. J.

See Engineering News advertisements, pages 52 and 56, October 27th issue.

Bids opened November 28th.

CHARLES ANDERSON,
Borough Clerk.

W. W. YOUNG,
Consulting Engineer.

U. S. ENGINEER OFFICE, Jacksonville, Fla., October 31, 1910.—Sealed proposals for the removal of the wreck "Chatham," at the entrance to St. Johns River, Florida, will be received at this office until 12 M., November 21, 1910, and then publicly opened. Information on application. GEO. R. SPALDING, Capt., Engrs.

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